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THE  
**NEW-ENGLAND JOURNAL**

OF

**MEDICINE AND SURGERY,**

AND

**Collateral Branches of Science,**

CONDUCTED BY A NUMBER OF PHYSICIANS.

**Vol. VIII.**

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Homo naturæ minister et interpres tantum facit et intelligit, quantum de naturæ ordine, re vel mente, observaverit; nec amplius scit aut potest.

FRANCIS BACON.

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**NEW SERIES, VOL. III.**

**BOSTON:**

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Fig. 2.



Fig. 3.



Fig. 1.

# The New-England Journal

OF

## MEDICINE AND SURGERY.

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No. I.

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*A Case of Ichthyosis Cornea, with Observations.* By ABRAHAM HASKELL, M. D. [With a Plate.]

[Communicated for the New-England Journal of Medicine, &c.]

**A**S Ichthyosis Cornea is a very rare disease, which has fallen under the observation of but few practitioners; and as Dr. Willan in his excellent treatise upon Cutaneous Diseases observes he never saw a case of it; it is presumed, some further account of it, which is the result of actual observation, will not prove unacceptable.

### *The Case of Lavinia Coolidge, aged six years and a half.*

April 25th, 1818, I first saw this unfortunate little girl, who exhibited the following very singular appearances: On the end of each of her thumbs and fingers, (except one finger, from which, her mother said, the substance about to be described had fallen off,) stood a dry, hard substance, of a cylindrical form, and of a yellowish brown or dirty colour, of a rough or wrinkled surface, some of which were a little incurvated, whilst others were nearly straight, and from three fourths of an inch, to an inch and an half in length. Their diameters were somewhat less than those of their correspondent fingers. On the tops of some of these excrescences stood the finger nail in its proper form, having quitted its hold to the finger; whilst in others, the nail retaining its attachment to the finger, had elongated and grew out as the excrescence increased, and equalled it in length. And the ends of the fingers next to

those excrescences appeared preternaturally red and inflamed, and exhibited to the touch a degree of tenderness.

The skin in the palm of her hands and on the inside of her fingers was hot and dry, a little chapped, and partially covered with scabs or crusts of different sizes, and of the colour of the excrescences above described, between and under which, the skin looked red and inflamed ; and the tendons of the flexor muscles of the fingers were a little contracted, so that she could not fully straighten her fingers. But the skin on the back of her hands appeared in its natural state.

The toes have a little of the dry, hard substance above described, on their extremities, but especially under the ends of the nails, which are of a yellowish white, with their ends a little turned up. Her mother says, those excrescences have been as long on her toes, as those on her fingers now are, but have fallen off, and that new ones appear to be forming on them.

On the point or extremity of each heel is situated a large, round, hard and dry protuberance, the diameter of whose base is about an inch ; one of which rises three fifths of an inch above its base ; the other about one half as high. There are likewise on the side of the heel, on the edge of the sole, the side of the little toe, and on the back part of the hairy scalp, similar protuberances of an oval or oblong form, and of a texture and colour similar to that of those excrescences on the ends of her fingers. The skin both on the tops and soles of her feet exactly resembles that on the backs and palms of her hands. And the whole hairy scalp is covered with a white scurf, as in Lepra. There are also observed on various parts of her body and limbs, marks of a preceding eruption from which the scabs had fallen off, and the parts healed, but left behind them reddish or purplish spots.

Her general health appears to be very little, if at all, impaired by the disease. Her appetite and digestion are good ; her alvine and urinary discharges retain their healthy state ; and her mother thinks she would sleep well, was she not disturbed by the burning, itching, and smarting of her head, hands and feet, which still continues pretty troublesome. Her skin is generally dry ; her countenance exhibits a degree of sickly paleness ; her pulse is a little weaker and quicker than natural, but without any evident augmentation of heat ; and she is considerably emaciated : but these marks of debility are no more than what we might reasonably to expect to follow an eight-months course of medicines, to which she had been subjected.

The foregoing is a correct statement of her present symptoms. A general history of her case, comprising her state before the present disease made its appearance, together with the manner of its coming on, was obtained from her mother, a poor, but intelligent woman, by putting to her the following questions, which, that the reader may have it in the same manner in which I received it, I shall here transcribe, with her answers to the same.

Questioned by the writer. Has Lavinia been considered as a healthy child?

The mother's answer. She was always very healthy, till she was attacked by this disease.

Q. When did this disease first make its appearance?

A. A year ago last August.

Q. In what manner did it first discover itself?

A. I first thought her nails grew longer than usual; and under their extremities I observed a white scurfy matter, which I supposed might proceed from her scratching her head, which was covered all over with such a white scurf, and itched much; but upon attempting to clear it away, I found it to consist of a hard substance, which I could not remove without the assistance of a knife, nor even with that, without exciting some pain.

Q. Have any of the other children been affected by any similar disorder?

A. They have had no such disorder, except the itch. Three years ago last March, Mr. Coolidge and our little daughter Betsy, then seven years old, appeared to have caught the itch, and soon after the whole family were affected by it. In May following we all anointed with the common itch ointment of the shops, and seemed to be cured; but in a fortnight or three weeks it again made its appearance; and in five or six weeks it became worse than before. We therefore anointed again, and seemed to be cured; but it again appeared as before: and thus we went on anointing once in about six weeks or two months, and seeming to be cured, till we had anointed nineteen or twenty times; and at length we all obtained a cure, except Lavinia; and her itching chiefly subsided, as soon as those excrescences began to appear, which, as before observed, was a year ago last August, except the itching, smarting and burning, in her hands, feet and head, in which places those symptoms have continued pretty troublesome throughout her whole disorder.

Q. Has any part of her body appeared scaly or scurfy, in any period of her complaint?

A. Soon after we got rid of that troublesome itch, I discovered her head covered all over with the white scurf before mentioned, which itching much, became sore, and discharged a viscid matter, which running down into her neck, formed her hair into a mat. And about the same time I observed the matter forming under the ends of her nails, as above stated. I observed, likewise, on different parts the following appearances: On the inside of her arms and thighs, were pustules, which itching excessively, run into clusters, and formed large crusts or scabs. And on the inside of her hands, and the bottoms of her feet, the skin was hot, dry and chapped, and partially covered with a scaly matter. And this affection of her hands and feet was accompanied by great heat, itching and smarting, which often prevented her getting her rest by sleep.

Q. Has this disorder appeared to affect her general health?

A. It has not; for though she has become somewhat emaciated, yet her appetite and digestion have generally been good, and the discharges from her bowels, and by urine have been natural; she never was inclined to sweat, like some children. And in regard to sleep, that has been much disturbed by the cause before mentioned.

Q. On what parts of her body have those excrescences been found?

A. On the ends of her thumbs, fingers, and toes; and all of these were of a long cylindrical form. They have likewise been formed on the point and side of her heels, on the sole, and edges of the sole of her feet, on the side of her little toe, and on the ball of one of her great toes, on the inside of one of her fingers, and on the back part of the hairy scalp; and all these were more properly protuberances with broad bases of a round, oval, or oblong form, and rising from one fourth to two thirds of an inch above the skin.

Q. You have mentioned their coming off; I will thank you to inform me how, and by what means those excrescences came off?

A. Some of them were cut off down to the quick; the consequence of which practice was this; they grew as much in a month afterwards, as they had done in a year before; consequently the operation was not repeated. But they have fallen off twice spontaneously, and grown again. And the manner of their coming off, is this; they first crack and peel off from the finger at their surface; and then they appear to hold only by something like a string or ligament at the tip of the finger, and by the nail, where that is not detached from the

finger or toe ; and at length those parts likewise give way, and then they fall off.

Q. What has been her usual manner of living ?

A. Her diet has consisted chiefly of milk, with a little meat. But she has ever had a strong craving for pickles, cyder, and such like sour things.

Q. Has she been freely indulged in the use of such articles ?

A. She has not ; for, from an apprehension that they were not good for her, she has been allowed only a very spare use of them.

May 30th following, I again saw the patient, and found her as follows : those excrescences on the ends of her thumbs and fingers had all fallen off, leaving nothing but a little of that crusty matter on their extremities, and under the ends of the nails, which appeared to stand off a little more than they naturally do. The crusty substance on the ends of her toes, appeared to have a little increased ; but her general health remained nearly *in statu quo*.

In regard to the mode of treatment which had been pursued, I regret, that it is not in my power to give it, the patient not having been under my care.

### *Observations upon Ichthyosis Cornea.*

In Dr. Willan's arrangement of Cutaneous Diseases, his fourth Order, denominated *Squamæ* or scaly diseases, comprises four Genera or kinds of disease, namely :

1. *Lepra*, or the ~~leprosy~~ of the Greeks.

2. *Psoriasis*, or the dry scaly tetter ;

3. *Pityriasis*, or dandruff ; and

4. *Ichthyosis*, or fish-skin disease, so called, because it forms on certain parts of the skin a dry hard substance, resembling the scales of a fish, but with this difference ; they are in some cases only thinly scattered here and there ; whilst in other cases they are more compact ; but they are never disposed in any regular or symmetrical order.

*Ichthyosis* consists of two species, denominated *Ichthyosis simplex*, and *Ichthyosis Cornea*.

*Ichthyosis simplex* is that species of the disease, which produces only scales on certain parts of the body, as above described.

*Ichthyosis Cornea* is that species of the disorder, in which dry, hard excrescences of a cylindrical form, are produced on the ends of the fingers and toes, which grow out from half

an inch to an inch and an half in length, and then may, and often do, spontaneously fall off, when a new crop of a similar kind, if the disease be not cured, will succeed them. And in addition to those cylindrical excrescences on the ends of the fingers and toes, there are likewise produced in different parts of the body certain round, oval or oblong protuberances, of a flattish form, or rising more pyramidically, but of a similar texture with the former. And the parts on which these protuberances are most usually produced, are the points and sides, of the heels, the soles, and edges of the soles, of the feet ; and the back part of the hairy scalp ; but they may occupy various other parts of the body.

Though a dry skin, and a scurfy or scaly appearance on certain parts of it, be symptoms common to all the above mentioned diseases, and show that they all partake of one common nature, and depend upon a similar general cause, namely, a diseased state of the skin ; yet the cause being local, and consisting of different degrees, occasions that different modification of the symptoms, by which we distinguish each of those diseases, from the others belonging to the same family. Thus Ichthyosis simplex is distinguished from Lepra, by the permanency of its scales ; whereas those of Lepra are deciduous. It is likewise distinguished from Psoriasis, by its scales being more generally diffused over the part affected ; whereas those of Psoriasis are situated in patches or clusters. But I will not enlarge upon the discriminating marks of these diseases. There is, indeed, such an affinity or family likeness amongst them, if it may be so called, that they may be said to differ in degree, rather than in any specific dissimilarity in their nature. For we shall seldom meet with one of those diseases of a higher grade, requiring a more intense application of the general cause, to wit, the derangement of the functions of the skin ; but we shall find depicted upon some of the parts less affected, the marks of some one or more of the other diseases of the same order, but of an inferior degree. An instance of this we have in the case before us. For we may consider Ichthyosis Cornea, as dependent upon the highest degree of cutaneous derangement ; the scurfy appearance of the hairy scalp, seems to belong to Lepra ; whilst the inflamed, rhagadous, and scaly appearance of the palms of the hands, and of the soles of the feet, are marks of Psoriasis Palmatis.

But I proceed to an inquiry into the nature of the disease under consideration. For this being ascertained, a rational

mode of treatment will be the natural result. For, according to an old adage, *a disease well understood, is half cured.*

This inquiry presents difficulties, which have not hitherto, as far as I know, been fully and satisfactorily solved. But their solution, before a rational and efficient method of cure can be instituted, appears indispensable. And to the want of it, I presume, is to be attributed the opprobrium so often attached to the practice in those scaly diseases. Any attempt therefore to remove those difficulties, though it should not prove completely successful, claims at least our candor, if not our approbation.

Our first inquiry will be, to ascertain whether the disease before us depend upon a general affection of the system, or whether it be local, and depend only upon an affection of a particular part. If it were general, and the whole system were concerned in its production, the several functions would be disturbed. But these in general are observed to be regularly performed, except the functions of the parts particularly affected. The patient eats, drinks, digests and excretes, as usual, except a deficiency of perspiration; and there is reason to believe the child would sleep well, were not her slumber disturbed by the uneasy sensations of the affected parts. Hence it pretty evidently appears, that the phenomena of the disease before us, do not originate from any general derangement of the system, but from a local affection. And as the heat, itching and tingling, are the chief symptoms which disturb the patient, it likewise appears probable, that the seat of the local affection is in the skin.

And if it be admitted, as I conceive it must be, that the disease is a cutaneous affection, our next inquiry will be, to investigate the process, by which those excrescences are produced. Here, I presume, all will agree, that they must be formed in one of two ways, to wit, either by germination, or by concretion. If they germinated or grew out from the part, like the human nails, or the hoofs or horns of a quadruped, they would be strongly attached to the part, by the vessels which nourished them: and in this case they could not be deciduous. But on the other hand, if they were formed by concretion; then, as they would require no vessels to feed them, so they could have none to attach them to the part; consequently they would be liable to fall off, whenever the matter of which they were composed, lost its tenacity, or cracked by drying. A close examination of their structure refutes the idea of their vascularity, and the manner of their falling off demonstrates their formation by concretion.

And if concretion be the process by which those excrescences are produced, whence, it may be further inquired, proceeds the material of which they are composed? To this inquiry there can be but one answer. It proceeds, undoubtedly, from the excretory vessels of the skin. But to this, it may be objected, that the cutaneous excretions, in their natural or healthy state, are incapable of forming such concretions. For these, it may be further urged, consist, principally, of two kinds, namely, first, of the matter of perspiration, which is a watery fluid, evaporable as the dew of the morning; and secondly, of an unctuous or oily substance, secreted by the sebaceous glands; both of which, taken together, serve to moisten the epidermis, and keep it soft and pliant; but in their natural state they are not calculated to form those concretions.

To this I shall readily concede; but must further observe, that a diseased state or morbid action of secretory organs, always vitiates the quality of the fluid secreted, by rendering it different from that which nature designed it to be. This seems to be the fact, in the present case. For it appears, that the cutaneous secretion is changed from its natural and healthy state, to a morbid one, in which viscosity predominates, which renders it incapable of complete evaporation. Instances, in which the diseased state of the secretory organs produces as great a change in the quality of the secreted fluid, as that which is here alledged to have taken place in the case before us, are abundant. Thus the diseased state of the kidneys secretes a morbid matter, which forms urinary gravel and the stone in the bladder; the diseased state of the liver secretes the material which forms gall-stones; the secretaries situated about the small joints, when diseased by the inflammation of gout, secrete the calcareous matter, which forms those chalk-stones, so called, which sometimes occur in that disease; and in those cases of phlegmonic inflammation, which terminate by suppuration, the diseased action of the secretaries forms the matter called pus. And, furthermore, the mucous glands situated in the nares, fauces, and trachea, which in their healthy state secrete a mild mucilaginous fluid for the purpose of defending the tender nervous fibrillæ from the action of the air, and any irritating material which may, by chance be inhaled with it, do, when thrown into diseased action, by the inflammation occasioned by a violent catarrh from cold, pour forth a flood of fluid matter, which, instead of shielding, greatly irritates the parts, producing very troublesome sneezing and coughing. And this discharge may be either so thin and acrid, and to in-

flame and even excoriate the parts over which it passes; or, it may be rendered so extremely glutinous and tough, as to render the dislodgement of it very difficult, if not impossible. An instance of this last we have in the croup, in some cases of which, the inflamed mucous glands ooze out into the trachea a viscid fluid too glutinous and tough to be dislodged by the feeble efforts of a child, but remaining spread upon the inner surface of that cavity, and exposed to the drying effect of a current of air passing over it at every breath, is, at length, by evaporation converted into a solid substance denominated a preternatural membrane. Now there can be no doubt, that this croupy membrane, if secluded from all resources of moisture, and exposed to the action of the same exsiccatting agents, to which those excrescences have been subjected, it would form a substance as hard.

Thus we see, that the secretory organs, by being thrown into diseased action by inflammation, may, and oftentimes actually do, form materials not only different, but likewise entirely foreign from those, which, in their healthy state they are accustomed to secrete. And it is abundantly evident, that a certain degree or modification of cutaneous inflammation accompanies every species and grade of the diseases belonging to the order of *Squamæ*. In the case before us, the ends of the fingers and toes, adjacent to those excrescences denoting the highest degree of cutaneous derangement, were red and inflamed. The palms of the hands and soles of the feet, which were dry, rhagadous, and bestrown with crust or scales, imitating psoriasis palmaris, and denoting a less degree of the same derangement, were likewise preternaturally hot, red and inflamed. And the hairy scalp, which in the early stage of the disease became ulcerated, discharging a viscid material which matted the hair together, must have suffered a great degree of cutaneous inflammation; a degree of which still discovers itself, by the redness of the skin under the scales or dandruff, which yet cover the head. From all which, we may rationally infer, that a certain degree or modification of cutaneous inflammation may be the proximate cause of that derangement in the action of the secretory organs of the skin, which occasions them, instead of secreting their accustomed healthy fluid, to generate and form a very different viscid material, which being oozed out upon the surface of the part affected, and being too glutinous for complete evaporation, hardens and dries upon the part upon which it is thus deposited, and thus by concretion forms those scales, crusts, and excrescences, which characterize the several diseases of this order. One circumstance per-

culiarly favourable to the concretion of the glutinous matter thus deposited, is this; cutaneous inflammation always suspends perspiration, as is evinced, by the roughness and dryness of the skin of the inflamed part. Hence there can be no supply of aqueous fluid furnished, to dilute the viscid material, or prevent its concretion.

The growth of those excrescences is a phenomenon, of which I shall offer the following explanation. The adaption of new matter to effect their growth, must be made to their under surface next to the skin. And the quantity of this morbid material must be very small, and its production extremely slow. For if it were oozed out faster than it could concrete, it would detach the old concreted matter from its hold to the part, and the new material not having had time by evaporation to acquire the requisite degree of tenacity, those excrescences would fall off, as fast as they were beginning to form; consequently, they could not, under these circumstances be formed at all. But, on the contrary, if this morbid material were formed, oozed out, and applied to the under surfaces of those excrescences, in the same slow, gradual, and imperceptible manner, in which the nutritious matter, forming the nails, is applied to effect their growth, under such circumstances I can see no reason why those excrescences might not increase to almost any length or magnitude.

And there appears to be two causes which may occasion those excrescences to fall off. The first is a redundancy of the morbid material, which will occasion their fall, in the manner described in the last paragraph. The second is the suspension of the production of the morbid matter. For if there be no new material furnished, the old concreted matter will become so dry, that, by losing its tenacity it will crack and fall off. And in this way they will come off, when a cure is effected.

In regard to any particular circumstances, which may dispose the cutaneous system to fall into that peculiar inflammatory state or diseased action, upon which Ichthyosis Cornea appears by the preceding inquiry to depend, and which thus becomes the predisposing cause, its rare occurrence does not afford opportunities sufficient to settle this point with precision. It is however represented, as having been observed to take place after the small-pox, and some other cutaneous diseases. In the instance before us, there appears no room to doubt, that it was occasioned by one of the most obstinate cases of the itch, with which we are acquainted. In what manner do those cutaneous affections become a predisposing cause?

Does the power of habit continue the inflammatory disposition, after the cause which produced it is removed?

*Respecting the Treatment.*

If the foregoing observations be correct, they will afford sufficient data, from which may be deduced the principles, upon which the treatment of Ichthyosis Cornea, and the other scaly diseases, ought to be conducted.

And if it be true, that cutaneous inflammation induces that diseased action of the secretory organs of the skin, which occasions them, instead of secreting their appropriate healthy fluids, to generate and form a morbid and glutinous material, different and even foreign from that, which nature designed them to secrete, and which is the cause of those singular phenomena, which distinguish this, and its kindred scaly diseases: then it will evidently appear, that the indications which are the natural result of our researches will be,

1. To remove the inflammatory affection; and
2. To restore the action of the secretory organs from their morbid, to a healthy state.

Both of these indications are partly answered by the same means. For if we remove the cutaneous inflammation, the diseased action of the secretory vessels which depends upon it, will cease with it. For take away the cause, and the effect will cease.

The cutaneous inflammation may be removed,

First, generally, by all those means, which are known to place the system in a situation the least disposed to favour inflammation in general.

Secondly, and particularly, by venesection, which must be regulated by the violence or extensiveness of the disease, and the ability of the patient to bear the evacuation. If the disease be mild, or occupy but a small part of the surface, or the patient be debilitated, it ought most certainly to be omitted.

By cathartics, which should never be of the drastic kind, but mild in their operation, yet efficacious, but such as may be frequently repeated.

By the daily use of the warm bath, or the soaking of the parts in warm water, warm bran and water, or, what is still better, in warm milk and water; for one or the other of these, should on no account be omitted. And this should be followed by anointing the parts with some mild emollient ointment; and if the hands and feet be the parts affected, these means should be assisted, by defending the parts from the action of

the air, by constantly wearing soft oiled leather gloves and socks. For if it be true, that those excrescences are formed by concretion, and that this concretion is effected by the process of evaporation or drying, which, I believe, must be admitted as facts ; then it of course follows, that whilst the parts are thus kept soft and pliant, it will be impossible for those excrescences to be formed upon them ; their production must cease. The warm bath is a substitute for perspiration to keep the skin soft and pliant, at the same time that it mitigates the inflammation.

After the cutaneous inflammation shall have been in a good degree removed by the means above recommended, we may substitute the cold bath, or the washing of the parts with a weak brine, which will give strength and firmness to the parts which have been debilitated by the preceding inflammation. And in lieu of the mild ointment above recommended, we may substitute a stimulant one, containing some escharotic material, or a lotion of a similar quality : but the preference should be given to the ointment, because it will not suffer the skin to dry so soon ; the keeping of the skin soft and pliant, being an object of primary importance in conducting the cure.

In treating of the cure, it might have been expected, perhaps, that I should have recommended a mercurial course, with the view of subduing some virulent humour, or of correcting a glutinous or some other vitiated state or quality of the blood, upon which some might imagine the disease to depend. But from a diligent inquiry into the nature of the disorder, I have not been able to detect, any such cause. And notwithstanding the reverence due to antiquity, I am constrained to believe, as it respects the disease under consideration, that they are phantoms which exist only in imagination. Calomel indeed may be advantageously joined with other cathartics, which will render their operation milder, and at the same time more efficacious in removing cutaneous inflammation. And with this view, calomel and jalap, each one part, joined with two parts of super-tartrite of potash, will form an excellent cathartic for robust patients. But I cannot perceive the propriety of subjecting the unfortunate patient to a tedious course of mercurials, nor indeed to that of any other remedy intended to act upon the system generally, for the removal of a local complaint. I know it is customary with many *routinists* who do not trouble themselves much with the *whys* or the *wherefores*, to make use of calomel as a common-place remedy, and as though it were a *Catholicon*, to prescribe it in almost all cases indiscriminately. This custom, (for it ought not to

be called practice,) is justifiable only where diseases are imaginary, and the cure consists in the application of *placebos*.

In making the foregoing practical remarks my object was not to exhibit a full detail of the practice, but to bring to view the principles upon which it ought to be conducted. And whilst I have gone some length in recommending the use of those means, which are deemed the most important, and even indispensable: I have thought it equally necessary to pass some strictures upon a practice, into which the young practitioner would be the most likely to fall, but upon which, on rational grounds no reliance can be placed.

Finally, as Ichthyosis Cornea is a rare phenomenon, and the majority of country practitioners are unacquainted with it, and do not possess the means of acquiring information concerning it, I have thought it might conduce somewhat towards the furtherance of medical knowledge to lay it before the public. And whether the foregoing observations shall bear the test of future investigation or not, if they should in any way assist others in arriving at the truth; this consideration, together with a consciousness of my best intentions, will be my consolation, and amply reward me for the time and attention I have devoted to the subject.

*A Drawing representing the appearances of the patient's left hand, and of the fore finger of the right hand.*

Fig. 1. A representation of the back of the left hand, on which the skin retains its natural appearance, except at the ends of the fingers, where it looks red and inflamed.

a, a, Represents those excrescences, where the nail is detached from its hold on the finger, and being carried off by the growth of the excrescence, is found situated at its top.

b, b, b, Exhibits the appearances of those excrescences, whether situate on the thumbs, fingers, or toes, in which the nail retaining its attachment, elongates and grows out as the excrescence increases, and equals it in length.

Fig. 2. A representation of the inside of the same hand and fingers, the skin of which is rough, dry, and a little chapped, red and inflamed, and beset with scabby or scaly incrustations. In this position of the hand the nails are not seen, except a little of the thumb nail, which appears elongated, as before stated.

**Fig. 3.** A side view of the fore finger of the right hand, on whose point stands one of those excrescences, with the finger nail at the top of it. The inside of the finger is red and inflamed, like that of the hand; and on the surface of its curvature is formed an excrescence nearly cylindrical, of about an inch in length, and a third of an inch thick, and attached to the finger longitudinally; it extends over the two first joints, has a deep fissure at each joint penetrating about half way through it, which fissures were probably produced by the motion of the finger during the formation of the excrescence.

[The following Cases are from the 4th and 5th Vol. of Abridgement of Transactions of the Royal Society.] Ed.

*Concerning Horn like Excrescences growing on the fingers, &c. By Dr. R. WROE, Warden of Manchester College.*

NATHANIEL HULME of Bolton, eight miles from Manchester, aged about 17, had the small pox at about eight years old: soon afterwards, he had an itch, almost to the degree of leprosy, whereby his fingers and thumb nails began to grow thick, and by degrees hardened into horns; which grew in seven or eight months, some an inch in length, and some almost two inches, and others much longer. It began in the fore finger of his left hand, and so to all the rest of that hand. All which horns, at about the end of twelve months, fell off one after another, without any pain, unless when cut off, as they were at first, there appearing great quicks or roots under the nails. By degrees they come on the thumb, and then on the fingers of the right hand; which grew to the same length in about a year's time, and then fell off, he having shed them five or six several times. They are now at present all come off his left hand, but growing again: that on his little finger is two inches long. This account I took of him above two years since, in 1702; and have seen him frequently since, and lately, and the horns still grow, and fall off, as usual.

In a second letter dated Oct. 2, 1704, wherewith two of the horns which grew upon the boy's fingers were sent, Dr. Wroe mentions, that he had then all the fingers of both hands armed with the like, and some as long as those he sent. He had them on every toe also, but kept them cut, that he might be able to wear shoes. He adds that he saw him a few days before, and

thought that he could not live long, being miserably overspread with his leprosy.

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*Account of a person with horney excrescences, or extraordinary large nails, on his fingers and toes. By MR. LOCKE.*

MR. LOCKE saw this young man at Paris, in May 1678. He was then between nineteen and twenty. Those horney excrescences, like ill-shaped claws grew on most of his fingers and toes instead of nails, some of them four inches in length. There were some also on the back of his hands, but shorter and broad. This disease began about three years before, after having the small pox, to which he attributes its origin.

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*Cases of "Delirium Tremens," or of "a peculiar disease of drunkards." By WALTER CHANNING, M.D.*

[Communicated for the New-England Journal of Medicine, &c.]

IT is well known that persons who indulge excessively in the use of ardent spirits, are occasionally attacked with delirium, and that this sometimes terminates in death. This delirium with its accompanying symptoms, is treated of by Dr. Armstrong as "a peculiar disorder of drunkards,"\* while Dr. Sutton, from a very constantly attending symptom, has termed it *Delirium Tremens.*†

This disease has some peculiar symptoms. It requires a somewhat peculiar treatment. It may be confounded with other diseases, in which delirium is a prominent symptom. The treatment proper for such diseases has been almost invariably fatal in this. A few pages will be devoted to some observations, which the writer's practice has enabled him to make on this disease, and to a short abstract of the opinions and experience of others.

CASE FIRST.

The first case I met with of Delirium Tremens, occurred a few years ago, and was in a very short time fatal. The patient was a remarkably stout young man, and till a few

\* Illustrations of Typhus by J. Armstrong, M.D.

† Tracts by Dr. Sutton.

weeks previous to the attack of delirium, had enjoyed uninterrupted health. He had unconsciously associated himself in business with a knave, and soon found that the small property he had accumulated was rapidly wasting. The transition from good to bad habits was rapid, and he soon yielded to excessive indulgence in drinking. He became depressed and melancholy, and at length was seized with delirium. I saw him a few hours after the attack. I found him surrounded with men, who found it difficult to confine him on his bed, or even in the room. His countenance indicated extreme mental distress; his head was incessantly turning in various directions, as if following the movements of some object which threatened him with great evil. The features expressed that state of mind, in which perpetual apprehension is kept alive by the images of a diseased imagination. His body was agitated, and universal trembling at times took place. Although he had so violently resisted the efforts of his friends to restrain him, I found him almost at once influenced by what I said to him. He remained quiet in bed, and on any attempt to start, he readily obeyed my request for him to be quiet. He gave me his hand,—answered my questions, with precipitation, but correctly. He looked attentively at me during my questions; but when they ceased, he would at once become incoherent and violent. His face was turged with blood. His tongue was moist, and the perspiration even profuse. I treated this case, as others apparently similar, are treated. The patient was bled, the head vesicated, the stomach and bowels were emptied, and anodynes were given at night. These means however afforded no relief; the patient became watchful from the moment of the attack, and never slept during its continuance, he became convulsed on the third day, and, after remaining comatose for a few hours, died. At the time of attending this, and some of the succeeding cases, the writer had not met with Dr. Sutton's tract on the disease.

#### CASE SECOND.

In this case, the patient had been an habitual drunkard. It was a very common thing with this man, on any indisposition to become delirious,—to be obstinately watchful,—to sweat profusely; while many symptoms existed which clearly indicated a considerable degree of local inflammation. The lungs were most frequently the seat of disease with him, and very slight exposures produced cough, stricture, and pains in his chest. He was seized with these last symptoms with unusual violence

in the winter season, and the usual treatment in such cases fully tried. The pectoral symptoms yielded gradually, and towards their close a delirium, with peculiar symptoms, was developed. The enfeebled state of his body did not allow of very violent exertions. Constant restlessness, watchfulness, sweating and trembling, accompanied the delirium. The patient was by occupation a shoemaker, he would sit up for a long time in his bed, and go regularly through the various operations of his trade, he was constantly conversing, as with those who usually employed him, and his labours were only checked by exhaustion, he frequently started, as if some object peculiarly horrible was near, or getting into his bed, and he frequently pointed it out to me, describing its colour, features, motions, &c. The watchfulness continued, and the sweating was unusually profuse. The pulse in this, and in the preceding case was not remarkable during the delirium for its force or frequency. It was more rapid than in health, but not more so, than is frequently observed in any unusual exertions of the body. For the pulmonary symptoms, this patient had been put upon an alterative course of submuriate of mercury and opium. Ptyalism took place, but not until the delirium and its attending symptoms had so far reduced the patient as to render it probable he could not long survive. An amelioration of disease very soon followed the ptyalism, and the patient unexpectedly recovered.

#### CASE THIRD.

The next case was an adult male, who was in the constant habit of using large quantities of ardent spirits. The symptoms were similar to those just mentioned. In two attacks relief had been obtained by the same means. The lungs had been first seized in three attacks of delirium which he had suffered, in the third of which he died. The sweating in this case was very remarkable, and continued throughout the disease. Watchfulness also constituted a constant and very distressing symptom. The trembling, particularly of the tongue and hands were also striking, the pulse was fuller than in either of the preceding cases, and the pulmonary symptoms continued with more violence than in the last.

#### CASE FOURTH.

A man of about 35 years of age, had been under my care during several attacks of severe disease. I observed in this

patient a strong disposition to delirium towards the close of these attacks. This disposition was most observable, during that period of his illnesses, in which the violence of morbid action had abated, and convalescence was about to take place. It amounted to little more than occasional confusion of mind, unusual irascibility during the day, and watchfulness with light headedness at night; as his strength returned those symptoms disappeared. During disease, he was subject to excessive sweating,—he spoke suddenly, and as if he were not aware of what he was about to say, or how to express himself. The expression of his eyes was wild, and they were generally more or less bloodshot. Some months previous to the attack which proved fatal, he was attacked with very severe inflammation of the chest, in this attack the disposition to delirium strikingly manifested itself. His recovery was for a long time dispaired of. I became acquainted with his habits, and found that he was in the constant use of large quantities of ardent spirits. The quantity he could bear without intoxication was very great, and as indulgence did not interfere with his occupation, he thought it perfectly safe to continue it. He was however told of its probable consequences, and assured, that in all probability another attack of disease of the nature, and as violent as that from which he had just recovered, would be fatal. The habit however was not relinquished, but increased, and for a fortnight before the last attack he had been unusually depressed, sleepless, and without appetite. He had during this period discovered at times an evident alienation of mind. It discovered itself more particularly in threats of great personal injury to his family. The day before his attack he had been exposed almost constantly to rain and cold on the water, and was seized in the night with vomiting, purging, and the disease of the chest to which he had been long subject. His general health till within a fortnight of the attack had been good, and when taken ill he was more than ordinary strong and fleshy. The usual treatment of severe inflammatory affections occurring in such subjects was resorted to, and in three days the violence of the symptoms had abated, the strength and frequency of the pulse were lessened, the cough and soreness of the chest mitigated, and the patient appeared in a fair way to disprove the correctness of the prognosis which had been ventured on a former occasion. It was at this time that delirium attacked him. At first it was mild. Sleep however was entirely wanting. The patient sweated profusely, and was very much enfeebled by severe disease, and the previous means of cure which the circumstances of the case re-

quired. Along with the delirium a great deal of muscular strength manifested itself. He at once rose from his bed, declared he was well, and insisted on returning to his usual occupation of plastering and whitewashing. He became violent upon opposition, and to quiet him, his friends allowed him, without any tools however, to occupy himself as if really at work. When induced to lay down, it was hardly possible to keep him for a moment at rest. He was hunting his bed clothes for rats, eggs, &c. &c. asserting in the most positive manner, that he not only saw them, but extended his hand in the manner of giving them to the bystander. I could always control this man. On entering his room, I always found him in motion, bathed in sweat, and trembling with fatigue. He answered me correctly, offered me his hand, and seemed for the time to be perfectly sensible of the relation that subsisted between himself and me. I prescribed for him pills of the submuriate of mercury with opium, and at length opium alone, in doses of two grains every three hours, to be increased until sleep were procured. He could not be prevailed on to take them regularly, and rest was never induced. He did not sleep in short after the access of the delirium, he was seized with a violent convulsion, on the third day, became comatose, and died.

#### CASES FIFTH AND SIXTH.

In two other cases the symptoms which characterised the disease were similar to the preceding. They were both adult males, one about 35 and the other about 40 years of age. They were first seized with vomiting and purging, these occurrences were shortly succeeded by severe pulmonary disease. At the close of these affections delirium, with the characters, above detailed, variously modified, occurred. These cases were in the first place so treated as to relieve the most urgent symptoms. Calomel and opium in small doses were afterwards given. In one case the treatment was successful. During the violence of the disease in this case the pulse was too rapid to be counted. The other case proved fatal. These men habitually indulged, in the use of large quantities of ardent spirits. One of them was an habitual drunkard.

I shall without adding to these cases, in the next place give an abstract of a disorder peculiar to drunkards, from the works of the authors, mentioned in the first part of this paper, and show in what respect the case now briefly detailed, differ from their descriptions. According to Dr. Sutton, *delirium tremens* commences with the usual symptoms of dyspepsia.

The pulse is rather unsteady or fluttering, than quick. The tongue is furred but moist, and the heat of the skin is nearly or quite natural. The patient is restless, has no disposition to lie down, is for ever uneasy, and there is a general agitation of the frame, with tremors of the hands. The mind is perceived to waver. Fatiguing conversations on common affairs, and broken discourses succeed, and these are followed by great anxiety in the patient about his affairs,—a strong desire to be engaged in business; and he will even make violent efforts to liberate himself from the restraints of his attendants. There does not appear to be any malignity or ill nature in these exertions, the patient on the contrary in other respects is tractable, and takes the medicines offered him willingly. He complains of no bodily pain, and in the height of his delirium, will even for a moment, recognise his friends about him. The tremors of the hands are now great. "When the patient is at all still he is constantly occupied with picking the bed clothes, and in various motions of his hands." In the height of the paroxysm, the evacuations are passed involuntarily—the pulse becomes very rapid, the exertions of the patient are generally accompanied with a most profuse, and sometimes offensive, clammy, and cold sweat. The heat of the skin is seldom intense, nor is the patient thirsty. The countenance is dull, and the eyes are suffused, "in the height of the paroxysm the patient is in an unremitting state of watchfulness, which continues until the disease is alleviated, or is succeeded by insensibility, which may partake of coma or apoplexy, ending in death."

Dr. Armstrong in his work on Typhus and other fevers, gives an interesting account of a "peculiar disorder of drunks." His description agrees in many of its parts, with the one just given from Dr. Sutton. The symptoms of the early stage of the disease, would almost seem to have been copied from Dr. Sutton. They are such symptoms as attend an attack of dyspepsia. Constitutional affections soon follow. The patient becomes irritable and watchful. His hands tremble, and profuse perspiration breaks out, on the smallest exertion. To these succeed the strongly marked delirium peculiar to this class of patients. Dr. Armstrong has given a very lively picture of this delirium. "The patients suppose that their affairs are ruined; or that certain persons have conspired to poison or shoot them; or that their friends have deceived or deserted them; or that they are confined against their inclination in a strange place. Occasionally they imagine that they see frightful objects, the im-

pressions of which are so forcible, that they loudly call for assistance to drive them away. At other times, they declare that vermin are crawling over the bed or about their clothes; or that bright or dark spots are floating in the atmosphere; sometimes they fancy that they hear remarkable noises in the room or at a distance; and in other examples, alternately listen and speak, as if they were conversing with one that was present." If flatly contradicted they become violent, and passionate. If treated mildly, they will answer questions gently, and with distinctness. The disease may continue for a few days only, or it may be extended to weeks, when long protracted in peculiar subjects, as expressed by Dr. Armstrong, it may be identified with true and confirmed mania. "If a tranquil and long sleep can be procured in the commencement of the disease, recovery will commonly follow apace; although I once lost a patient unexpectedly in convulsions, after he awoke from an apparently quiet sleep of six hours. Indications of coma or convulsions; perpetual watchfulness; excessive irritation; violent and often renewed struggles; or low muttering delirium very rapid and thready pulse; frequent vomiting; a frequently stretched out, and very tremulous hand; difficulty of digestion, extremely cold and clammy skin; sub-sultus tendinum, and especially small contracted pupils, or a want of correspondence in them, with a degree of strabismus, are among the most unfavourable signs. Those patients who have been driven to intoxication from some great affliction, are generally in imminent danger; for during the progress of the complaint, their raving incessantly turns upon the recent calamity, and produces an irritation and exhaustion most difficult to be counteracted. But confirmed drunkards, who have previously laboured under chronic hepatitis, or some similar organic affection perhaps stand the worst chance; at least I have seen two subjects of this kind, who sank rapidly under this disease." Practical Illustrations of Typhus and other febrile diseases. p. 277—8.

These histories are collected from a great number of cases. They exhibit a train of symptoms very similar to those, in the cases contained in this paper. There is a striking resemblance between the important or characteristic marks of the disease in each of the accounts. In the writers cases, the delirium was somewhat modified by the diseases which immediately preceded its occurrence, and the respects in which his cases most differ from those of Dr. Sutton, are the violence of the previous inflammatory affections, and that enfeebled state of body, induced by their treatment. These

men most probably laboured under some chronic organic affection. The repeated attacks of pulmonary disease renders this probable, and the closing paragraph quoted from Dr. Armstrong's work, goes far to show that the fatality of the disease in the above cases is by no means singular, and also explains the greater resemblance between them, and his descriptions, than appears between them and Dr. Sutton's. In one of the writer's cases the patient had been driven by distressing circumstances, to the use of large quantities of spirits. The disease was violent, and speedily fatal. In the others, violent local inflammation preceded the delirium, which was also in some instances fatal. The precise nature of this peculiar complaint does not as yet appear to be perfectly understood. Dissection has not thrown much light on the subject. Dr. Armstrong has made examination in two cases, after death. Slight congestions only were observed in the brain and liver, while other viscera appeared natural. These congestions, which were venous, were probably very slight, for the speculations of this excellent author depend so much on a congested state of the brain and liver, that a greater degree of it would have been very accurately noticed, had it actually existed. In another place the same writer remarks "this disease is certainly to be considered as a strictly febrile one," while in another he observes, "in other instances, intoxication has a more powerful influence, and leads to inflammations in some of the vital organs; or occasions venous congestions, which are not followed either by high or regular excitement of the arteries. The disorder in question is generally of the last mentioned kind, for it seems to be accompanied with partial congestions of the brain and liver, from which together with nervous irritation, it perhaps derives most of its peculiar characters."

The state of the brain and liver which constitutes the proximate cause of the disease, is supposed by Dr. Armstrong, to be induced during the existence of that general collapse which succeeds intoxication, when the tone of the heart and arteries is diminished, and when the venous system must consequently be more or less in a state of congestion; and of this congestion the brain more especially to participate. "This disease most frequently occurs in *habitual* drunkards, and especially when, after repeated fits of intoxication, they suddenly lessen or leave off their ordinary stimulus for a time."

The cases I have briefly detailed, or at least some of them, may seem to confirm the pathological opinions of Dr. Armstrong. It is true that delirium of a very peculiar kind occur-

red in habitual drunkards during convalescence from severe diseases, which had been subdued by very active remedies. This was a state of the system however, in which one should hardly look for the occurrence of a disease strictly febrile, or of one partaking in any remarkable degree of inflammation. The individuals had been bled, freely vomited and purged. They had sweated profusely; had been taken, by disease, and in one very striking instance, by disgust from the use of spirits, and been nourished by the light diet of the sick. The arterial action if not rapid was not deficient. In one case the pulse was very quick. It was not however such as we commonly find it, during accumulations of blood in important organs, in which the heart seems labouring to remove congestions, or is excited by them to preternatural actions. Nor did any evidence of inflammation of the brain exist. There was no intolerance of light. The eyes were not more affected, than we should expect to find them during a constant absence of sleep, and their perpetual use, in watching every thing around the patients. The collapse contended for by Dr. Armstrong, as far as it may be induced by abstaining from stimulants, could hardly be supposed to have occurred in some of the cases mentioned, for the patients had not in the least abandoned the use of them. In one, delirium occurred while the individual daily used spirits, and in another patient still occasionally under my care, who cannot be induced to relinquish his destructive habits, the peculiar symptoms of this disease under notice, frequently discover themselves.

According to Dr. Sutton, this disease "consists in a previous state of the brain, that, under circumstances, is capable of producing the peculiar affection treated of." He considers this disease, in another place, a serious affection of, or a disorder of function of the brain. That it is "a disease depending on a state of habit brought on by certain indulgencies, which render it the precise disease it is;" and not to be considered as depending on previous diseases as its essential causes, even though immediately following such diseases. This writer further remarks, that "tremors (so universally observed by him in this delirium) are rather a symptom of a peculiar disease which has hitherto been considered to be phrenitis and when treated as such has proved to be fatal."

That a previous state of the brain, induced by certain habits is necessary to the existence of the disease under consideration, may be inferred, from the facts detailed in this paper. The affection most frequently happens to habitual

drunkards, although occasionally it appears in those who have for a short time only indulged in an excessive use of ardent spirits. Peculiarity of constitution also has an effect in the production of this delirium, for in some individuals a trifling excess has produced it. A predisposition to it, may remain latent for some time in the system, and genuine delirium tremens appear, long after the use of spiritous or vinous drinks, has been given up. The disease, in a slight form however, occasionally appears in those who are known not to indulge intemperately in drinking but who frequently use cordials as medicines, or brandy and water, for faintness and other vague affections of the stomach. I have met with a striking case of this kind, in which a strong tendency to the disease was indicated, by trembling of the tongue and hands,—unusual motion of the tendons of the wrists,—by sweating and sleeplessness, but in which the patient merely used bitters or cordials as carminatives, and bark and wine to provoke an appetite at the hour of dinner. The above symptoms when in their greatest degree, have been always accompanied with flatulence, severe vomiting and costiveness. Delirium however has not appeared in any of these attacks, notwithstanding the prostration which the individual in question has suffered and the sudden abstinence from all spiritous liquors, which a temporary disgust for them, during the above complaints, has always induced.

The diseases with which the delirium of drunkards may be confounded are phrenitis, and mania. From the latter, it is pretty easily to be distinguished. The peculiar circumstances under which it attacks the patient, the previous symptoms, the peculiar phenomena which attend it, the readiness with which it yields, and the short time in which it may be cured, assist us in distinguishing it from mania. From phrenitis, it may be distinguished by the state of the tongue, and of the skin. The tongue is rarely much coated, and is moist. In phrenitis on the contrary the tongue is brown, black and rough. Sweating is a favorable occurrence in this latter disease; in the delirium under notice, though excessive it is neither favourable nor otherwise. There is no great intolerance of light in delirium tremens and in the cases I have seen, the patients have complained but little of the head. It is not so sudden in its attacks. But above all, the treatment of phrenitis has been fatal in this delirium, while it has pretty readily yielded to one which would be hardly employed in idiopathic phrenitis.

In the *treatment* of this "disorder peculiar to drunkards," we are taught by those who have written most fully on the subject, to investigate very accurately, in its early stage, the

former mode of life, and the actual condition of the patient. If we learn that his previous habits have been such as seriously to weaken his constitution, to diminish those powers, which in their natural strength, would enable him to rise from the debility of severe disease : should his present state indicate extreme exhaustion, powerful depletion is not to be attempted. Moderate purgatives are to be first given. After their operations tepid affusions with salt water should be employed, and afterwards opium should be given in doses of forty or fifty drops, repeated at an interval of two or three hours till sleep be induced. If this treatment be not perfectly successful, opium with calomel, in such doses as will affect the mouth, with the tepid effusion, will effect the cure. To support the strength under the operation of the purgatives, occasional draughts of warm negus may be administered.

Dr. Armstrong, from whose work, what has just been said on treatment is taken, speaks in the next place on the exhibition of diffusible stimuli, and remarks, that this must be regulated, first by the preceding habits, secondly by the effect produced, and thirdly by the quantity of opium administered. The indulgence in their habitual beverage, must depend on its effects. If it accelerate the pulse, increase the irritation, and the tremors of the hands, it must be at once prohibited. Opium, which such patients can bear in much larger doses than others, when freely exhibited, will remove the necessity of spirits. The desirable effects from opium, are sleep, and diminished irritation.

In tolerably robust persons, who are addicted only to occasional intoxication, purgatives may be given more freely, than in the subjects above referred to. Opium is not to be given "until the bowels have been freely and frequently evacuated." *In them the purgatives must be employed, not only at the onset, but during the progress of the disease.* In such persons, I mean occasional drunkards, it has been customary with me for some time, to use purgatives and the tepid affusions in the day, and calomel and opium in the night ; and this plan, combined with a light diet, has rarely failed of success." In some cases venesection, has been necessary, taking however at once, rarely more than eight or ten ounces.

These quotations have been made in the words of the author, for the purpose of introducing the first sentence in the next paragraph, with which they seem somewhat at variance.<sup>22</sup> In *occasional* as well as in *habitual* drunkards, *purgatives must be limited to the early periods of the disease; because*

*they are most pernicious in the advanced stages, to which opium and calomel are most suitable ; the one to allay irritation, and the other to equalize the circulation.”* The writer’s experience confirms the opinions contained in this last quotation.

The cold affusion was practised by Dr. Armstrong, and with such decided benefit, that it stands alone in his account of treatment. This remedy it appears was suggested to Dr. Armstrong by his friend Dr. Ramsay of Newcastle upon Tyne, and had also been long used by Mr. Gregson of Sunderland. The method consists in dashing about three gallons of cold salt water, over the naked body of the patient, notwithstanding the existence of profuse perspiration. I have never used the cold affusions, (remarks Dr. Armstrong,) “but at an early period of this disease, and on those patients who appeared to have much constitutional vigour ; and I have not only given warm wine and water immediately before and after their application, but dried and rubbed the skin well with warm flannels, by way of supporting the *vis viva*, and insuring sufficient reaction. In all cases of a suspicious nature I have invariably preferred the tepid affusions, but find that they require to be followed by purgatives and opiates, or by opiates and calomel.”

According to Dr. Sutton, the great and leading object in the treatment of delirium tremens, is to procure sleep, and hence the remedy for this disease is opium. He shows that in his practice, blood-letting, purging and blistering have not only been tried in vain, but that when trusted to as the sole means of cure, they have been most unsuccessful. “When blood-letting, he remarks, has been employed and principally relied on, I have observed a fatal termination of the disease in almost every case, though the indication as to habit, for its use appeared strong and decisive ; and I have witnessed the cases of this disease to be always, on this account, the most rapidly fatal in robust and plethoric persons, where blood-letting was most used, without the aid of opium. On the contrary, when, in such habits, the delirium tremens has been endeavoured to be overcome by opium, the result has been the most favourable because the constitution is less broken down.” “In a very early stage of the paroxysm, however he remarks, “if in a plethoric subject, blood may be drawn, but I do not recommend the practitioner to wait to see the effects of it with a view of repeating the operation, as thereby the life of the patient may be endangered.” On the use of blisters, Dr. Sutton says, “I never saw a blister em-

ployed in the paroxysm of this disease, that did not occasion great irritation and augment it considerably, and even retard the effects of opium."

Of purgatives, he speaks more favourably. He however never found them cure delirium tremens. They were found useful auxiliaries to opium. In urgent cases their operation is not to be waited for. They may be combined with the opium, and when remissions take place, they may be given alone, and the opium resorted to afterwards as occasion may require. Dr. Sutton gives the opium in form of tincture, inspissated juice and extract. From thirty to forty drops of the former are to be given every two or three hours, till sleep be induced. Of the latter from two to five grains, with the same intervals, or with longer or shorter, and in greater or smaller doses, according to circumstances. "But the success of this remedy, it must always be kept in mind, is not to be promised, unless it goes to the extent of inducing rest or tranquility ending in sleep."

#### CASE SEVENTH.

A case has lately come under my care in which the efficacy of opium was strikingly manifested. This patient, a man of about thirty five, indulged very freely in ardent spirits. His form was large, and athletic, and his appearance was remarkably healthy. I was called to him on account of a severe convolution, which attacked him a few hours after having eaten some very indigestible food. His stomach and bowels were freely evacuated, and I left him perfectly relieved. Two days after I was again requested to see him. I found on visiting him that he had scarcely slept at all the two last nights, and was now delirious. The disease was at once recognized to be genuine delirium tremens. It seemed a case in which opium might be fairly tried. Calomel was combined with it, and it was ordered to be exhibited as directed by Dr. Sutton. Sleep was not procured that night. The next day I found him up, very cheerful, excessively polite, and from his own report, perfectly well. His symptoms were delirium, tremors of the hands, tongue, and limbs,—profuse sweating,—quick full pulse, sudden motions of the head,—and at times a steady and intense expression of countenance, as if some unusual object had arrested his attention in a remote part of the room. He was tractable as it respected myself, but very violent when left to his friends. I ordered the opium to be continued, and its quantity increased. In the evening I saw him again.

He was awake, and betrayed not the least disposition to sleep. Five grains of solid opium were now given, and as much more or ordered in two hours, should this quantity fail of proceeding sleep. The second dose was given and the patient could not be prevailed to take any more that night. I was called to him at five the following morning, and found him decidedly worse. I gave him six grains of opium, and in two hours six more. He now was evidently affected by the medicine. A very sudden change took place in his symptoms. He became calm, perfectly rational, complained of distressing feelings in his abdomen. A cathartic was given, which with the aid of injections soon relieved the bowels, and the patient fell into a tranquil sleep. He slept from about ten in the morning till evening. He then woke, took some light food, and soon fell into a sound sleep, and did not wake till late next day. After this he suffered no other complaint than a sore mouth, which began to show itself on the day in which his symptoms began to subside. This man took upwards of twenty grains of opium, in the course of the twenty four hours immediately preceding the occurrence of sleep. Although I am far from believing that the calomel in this case was entirely useless, I have no doubt that the cure was decidedly the effect of the opium, especially of the last two full doses, in which twelve grains were taken in two hours. I would also add; that from what has come under my notice in other and fatal cases, I have a strong conviction that this patient would have soon died, had not sleep been obtained. Since writing this paper, I have conversed with a respectable practitioner in this town, who has seen a good many cases of delirium tremens, and he informed me that he has been in the habit of trusting them to opium *alone*, and with almost uniform success.

Note.—From a remark in Dr. Armstrong's paper on delirium tremens, it might be inferred that this disease may be produced by sudden abstinence from spirituous liquors. An opinion something like this is common among those who are addicted to the debasing habit of drunkenness, and some have hesitated about giving it up, lest they might suffer some dangerous disease in consequence. From diligent inquiry on this point, I am authorised to say, that this has not happened in any case in which the patient has possessed resolution sufficient at once to break the habit, nor have I learnt that in the almshouse of this place, where habitual drunkards are almost daily admitted, and were they are at once taken from all use of spirits, and kept upon a diet, any thing but stimulating, that a case of delirium tremens has occurred. On the contrary, these men from being emaciated, enfeebled, and tottering in their gait, have left the house in very tolerable health.

[To the Editors of the New England Journal of Medicine, &c.]

GENTLEMEN,

THE following case which came under my particular observation in Guy's Hospital, may be interesting to some of your readers.

J. W. WEBSTER.

*Case of Hydatids of the Tibia.*

S. DIXON, a Seaman aged 25 years, was admitted into Guy's Hospital, Oct. 29th 1815.

His appearance was that of a person in good health, with the exception of a slight tumour above the inferior edge of the patella of the left leg, which began to appear about a month previous to his admission.

The account given by him of the commencement and progress of his complaint, was, that while at sea his left leg was fractured (simply,) and treated in the usual manner; in a few weeks he left his birth and moved about the deck on crutches (the vessel being at anchor in the Thames) when he received a blow (but not a violent one) directly over the place of fracture; a slight discolouration ensued but with little or no pain. From this time the tumour began to form.

A poultice of linseed meal was directed to be applied morning and evening.

A week after his admission, the tumour had extended downwards about one third the length of the Tibia, its surface smooth and shining, to the feel hard and irregular; in some places soft and a fluctuation perceptible, by pressing upon these with considerable force (which gave no pain) an irregular, rough surface was felt beneath. The poultices were continued four weeks longer, with occasional purgatives; the tumour however continued to increase. Numerous distinct lumps could now be discovered and moved beneath the integuments. The Unguent, Hydrarg. Camph. was directed to be rubbed upon the part twice a day, and the poultice repeated at night. The tumour increased and symptoms of constitutional irritation began to appear.

On the 15th of Nov. profuse salivation; the Mercury discontinued.

A consultation was now called, the disease was pronounced Fungus Hæmatodes and amputation proposed, to which the patient consenting, he was directed to take a gentle purgative and use the warm bath daily for a week, after which the ope-

ration was to be performed. A day or two after, the tumour had evidently diminished, and on the morning of the day fixed upon for the operation, it was so much reduced, that it was concluded not to amputate, but he was ordered to continue bathing and the use of purgatives. In addition to this I applied straps of adhesive plaster and a bandage with the hope of hastening the absorption. Dec. 12th. The tumour was softer, and by moving the finger over it with pressure, a sensation was produced, as of small pieces of bone rubbing upon each other. About four inches below the head of the tibia on the outer side of the leg, a prominence was observed and the integuments were there thinner than in any other part ; pressing upon the opposite side a fluid could be forced to this spot and cause it to project still more. The purging and bathing having reduced him very much, he was directed to discontinue them.

Having regained his strength, he soon after left the Hospital. In January following, he returned, the tumour had not altered in its appearance or feel, but he had greater difficulty in moving the limb.

The Emplast. Ammoniac. c Hydrarg. was now applied over the tumour in long straps and as tight as the patient could well bear. Jan. 16. A slight fluctuation was perceptible, and the tumour punctured with a lancet, a thin sanguous fluid was evacuated and numerous hydatids of the size of a small grape, the whole quantity about half a pint. An hour after, violent pains in the limb with rigors, came on. An emetic of Ipecac. and antimony was given, and after its operation,

Aq. Ammon. Acet.

Aq. Menth. Sativ.

Vin. Antimonii a a partes æquales. Perspiration was copious in the night and has rested better than had been anticipated. On the following day symptoms of irritation were evidently increasing, his pulse 120, full, hard and quick. Thirst great. Skin hot. Pain in the head, with chills and flushes and great restlessness.

The hard lumps in the tumour remained and excessive pain was given by slight pressure on them ; the size of the tumour apparently the same as before.

A fomentation of poppy heads was applied for an hour, after which a large poultice of linseed meal.

19th. The tumour has increased to an enormous size, with a new opening about three inches below the patella. Appetite and strength much diminished.

21st. The pain and redness having increased, twelve leeches were applied which gave some relief. A mild purgative produced a few evacuations. Tongue yellow and coated. Pulse 112, less full.

Fomentations and poultices continued; with every dressing, hydatids were removed.

Feb. 1st. He has experienced excessive shooting pains in the limb, and when they abated similar pains have been felt in the head, alternating in this manner with but short intermissions. He has no appetite and is anxious to have the limb removed.

The glands about the groin began to enlarge and the opening below the patella is now more than an inch and an half in circumference, at the bottom granulations appear. The discharge of fluid, with a little blood and hydatids continues.

The decoction of bark and infusion of roses was directed, and the usual applications to be continued.

The first opening continued to enlarge and numerous smaller ones formed in various parts of the tumour, from which the discharge continued copious. His strength was daily less, and he became emaciated. At his earnest request it was now determined to amputate. Porter and a more generous diet were allowed, and on the 8th, the day of operation, his tongue was cleaner, his appetite better, his pulse less frequent and he had no pain the night previous, which he attributed to his having pressed out all the fluid he could, at the last dressing.

Amputation was performed above the knee, the stump dressed, and the patient put to bed. He survived but a few days.

### *Examination of the Tumour.*

An incision being made longitudinally exposed a cavity in the tibia, of rather more than an inch in diameter and nearly two in length, filled with hydatids and a thin sanious fluid. With this, the external openings communicated. The head of the bone and part adjacent to the cavity were much enlarged by a deposition of osseous matter, the anterior surface covered by an irregular cartilaginous substance, containing spiculae of bone, through which were the openings into the cavity. The original fracture had never perfectly united and was traced distinctly through the centre of the cavity.

*Extracts from a letter on the Influence of the Atmosphere of Ostend, and of similar climates, in cases of Consumption.*

[Communicated for the New England Journal of Medicine, &c.]

MY absence with our worthy friend, first northerly and next southerly, has prevented me sending such remarks as I can do from experience in my own case, with respect to the curative effects of the marshy atmosphere of Ostend in Flanders, in affections of the lungs and spitting or vomiting of blood. It would give me very great pleasure to offer any hint which might stand a chance to be useful to Mr. —. But I must leave to the faculty to determine the nature of the case, and confine myself merely to my own case, and the situation of those consumptive persons who were afterwards completely cured by taking my advice and removing to Ostend.

I caught a very violent cold and neglected it; a spitting of blood, and gradually, every ordinary consumptive symptom occurred. Dr. Wm. Saunders was my physician. I followed his orders exactly. I then lived in London; I was removed to the country, and for six months I lived on milk and vegetables; I tasted neither fish nor flesh of any kind, nor wine, spirits or beer. I took constant exercise in an open carriage or on horseback, generally the latter. Still the consumptive symptoms attended with cough, hectic fever, spitting and vomiting of blood rather seemed to increase than diminish. I was daily weaker and more emaciated. Bleeding or vomiting of blood used to relieve me from the interior wheezing in my chest, and from the dimness of vision, but both, together and separately, always returned.

Dr. Saunders advised me to travel about the country, by way of amusement and change of scene, with two friends, saddle horses, and a phaeton. We viewed all the south west of England very quietly, and at our ease having travelled about 1000 miles in six weeks. While at Plymouth in the month of June, Dr. Mudge insisted on my wearing flannel next the skin, *all over my body*; this seemed to diminish the necessity of bleeding in the arm to once in three days, in place of three times a week; he agreed with Dr. Saunders in every point, and both advised me to lose blood (6 or 8 ounces) every time I perceived the dimness of sight, to prevent the vomiting; before that, I was sometimes forced to be bled even four times a week. My cough was sometimes better, the spitting of matter and salt-tasted globules, was sometimes less, but the main

disorder was in fact unabated. When I returned to my lodgings in the country, near London, Dr. Saunders advised me to try the marshy foggy air of Ostend, for which he took the hint from a very old book published by a Dr. Ker, who asserts that in his time, Ostend never failed to cure consumptions. I set out three days after my return from the jaunt I had made in Devonshire, Somersetshire, Cornwall, &c. &c. and in driving towards Dover I vomited blood often out of the doors of the carriage. I was three days at sea in bad weather. I could hardly walk when I landed ; I lived there on vegetables and milk, having now acquired rather a dislike to any other food ; from that time I felt no more dimness of sight, and was able to dispense with bleeding. I never applied more to physician or surgeon. In eight or ten days I was so strong that I could hardly credit the rapid change myself. In this situation Sir John Peter, the British consul, induced me to live with him, and leave off my milk and bad water, to make use of Moselle or small Rhenish wine at my meals ; nothing seemed now to hurt me, my appetite returned, my cough disappeared with every symptom of spitting of blood ; chance made me now acquainted with the worthy Dr. Roselt an excellent physician living at Ostend ; he assured me I was cured, and said he never heard, of any native of Ostend that had been consumptive. In three weeks after my arrival I sailed again for London and brought over my whole family ; and since that time to this, almost 30 years, I have had no sort of complaint of that nature, but I have followed with attention the advice Dr. Saunders, Dr. Mudge and Dr. Roselt gave me, *never to keep a cold 48 hours* ; though few people take less care of themselves than I do ; but I never sit in wet clothes, or with wet feet, and I prefer the floor to a damp bed or damp sheets.

I fear I have now gone into a tiresome detail, yet it may be satisfactory to Mr. S— to know these particulars ; to which I shall still add that I lived at Ostend near seven years, during which time I had many opportunities of bringing persons there who were consumptive, and all were cured. Among the rest one young lady, who I brought down from Brussels with her mother Lady Torrington.

Georgina Byng was then about 17. I had left her in good health some months before, when arriving at Brussels on business, I went to dine with Lady Torrington, and perceiving Georgina was not at the table, I asked her father where she was, he touched my elbow and whispered in my ear not to mention her name any more, for if her mother heard it she

would leave the table. He soon afterwards told me she was at the point of death, not able to walk across her room, given over by the faculty, and expected to live only a few days; her complaint, a galloping consumption. I put him in mind of my own case, which he knew, but it had escaped him; and, I added that since the physicians and even her parents had no kind of hopes, I wished they would give her to me. He consented, provided her mother and herself should also consent; my request was no sooner mentioned to her after dinner, than she expressed a strong desire to set out with me next morning, when I was to go at any rate, if I thought I could get her to my house alive. In this, I succeeded with much difficulty; but the eighth day after our arrival, she took my arm, and walked round the ramparts of the town without a rest; the 21st day she returned to her father in perfect health. She afterwards married lord John Russel to whom she had several children before she died, and had she lived, she would now have been Dutchess of Bedford. She never forgot she was my adopted daughter, and always called me father.

Now I have said enough to prove the quality of the air of Ostend in Consumptive cases. I wish I could say wherein this quality resides; but I will not pretend to what I do not know, nor venture to ascribe it to a larger quantity of azote and hydrogen, than common air. My opinion is that though the sea air may form a part of the Ostend atmosphere with certain winds, the chief part of it is combined with marsh miasmata which we know to be the chief cause and origin of intermitting fevers; and these are extremely troublesome at Ostend. But under the care of the good Dr. Roselt they are easily cured, and a much preferable evil to Consumptions. I am confident there are many situations in America equal to that of Ostend, and much resembling it. I have never been in the vicinity of Norfolk in Virginia; but from accounts of others, I imagine positions may be found on every, or on some parts of the sea coast of the northern states, where the spring tides flow into marshes behind and renew at times the brackish stagnating water—perhaps even the salt water may be the least part of the necessary composition, every feverish low situation may probably do equally well. I cannot yet ascertain whether any consumptions can exist on Fansse Riviere, or even at Point Coupée, but agues I am told are frequently there.

At all events I do firmly believe that hot tea, an abuse of too warm liquids—bad lodgings, where the night air is not ex-

cluded—damp beds, &c. &c. would create a consumption even at Ostend.

I am, &c. Wm. H.

Montesano, November, 1807.

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*Case of a Negro whose skin has become white.* By J. V.  
WIESENTHAL, M.D. of the United States Ship Independence.

[Communicated for the New-England Journal of Medicine, &c.]

**I**N passing through Baltimore on my way to Philadelphia in the year 1814, I met with a very singular and extraordinary phenomenon, which was then exhibited in that city. It was a negro man whose skin has nearly lost its native colour and become perfectly white. This man is near fifty-eight years of age. His grand fathers were both native Africans; his paternal grand mother was an Indian, the other grand mother a white woman. The original colour of his skin was a dark tawny, as our native negroes commonly are.

This wonderful change commenced about four years previous to the time I saw him, and first appeared at the roots of the finger nails, from whence it extended gradually to about the distance of an inch and there stopped. It next began on the neck, and this went on through the surface of the body and lower extremities, which are now entirely white except some part of the feet, and a few slight freckles on the breast. The arms are entirely changed as are the hands, except a small part on the back of them. The face and scalp are entirely white, the hair has also undergone some alteration. It is grey like that of an old man, and though it still retains the African character, short, curled, and strong, there are evident appearances of a disposition to become straight, long and soft as in the whites. The altered skin has not the softness, nor appearance of the whites, but is free from any red colour, and of a death like hue.

The manner in which the change takes place is this, it first becomes a little lighter in spots than the surrounding parts, and it goes on to grow paler and paler until it is perfectly white. Those parts that are covered proceed in their change most rapidly, those exposed more slowly. Since he confined himself for exhibition the change has been much more rapid; so that the more warm the body is kept the greater progress it makes. The only parts which retain any of the original

colour are the back of the hands and the upper surface of the feet.

This is a remarkable example of the effect of the alteration of the action of secreting vessels. As it is the Rete-Mucosum that gives the complexion of the skin, that substance must have undergone a total change from its original black to white; and as that as well as all other parts is derived from the blood, it follows that it must be separated by proper secretory vessels. I know no way of explaining this change but by supposing that the cutaneous vessels had assumed a new and unnatural action by which a matter different in colour and probably in other qualities was separated. This singular case therefore proves in a very elegant and satisfactory manner, that the nature of secretions in general, very much, if not entirely, depends on the conditions and action of the vessels. It may indeed be said that the colour of the Rete-Mucosum may depend upon a specific matter existing in its proper and perfect form in the blood-vessels and that the vessels merely separate it. But the analogy of the other secretions weaken the proposition and renders it highly improbable.

I will not go so far as to say that these are not matters separated from the blood which existed in the same form before. I know there are such as the vapour that exhales in the membranous cavities and perhaps some few others. But I am of opinion that all the compound matters such as bile, saliva, &c. are the product of peculiar combinations and that these combinations are produced by peculiar actions. This doctrine of secretion is generally prevalent since the principles of chemistry have been admitted in the explication of the functions of the animal organs.

With regard to the present subject it is hardly probable that the change could have taken place at all if the matter existed in its proper form in the blood-vessels, since the person always being in similar circumstances, the matter must have been always the same. There is therefore no other way of explaining this uncommon appearance but by supposing an altered action, and some other change of the condition of the vessels that secrete it.

*A reply to Dr. STEARNS's letter on Ergot.*

To the Editors of the New England Journal of Medicine, &amp;c.

GENTLEMEN,

IN my letter on Ergot,\* the name of John Stearns, M.D. was mentioned for the express purpose of bearing testimony of his having introduced "this article into public use." A medicine, which he, and many other respectable gentlemen believe to be an active remedy; but which, in my hands, and in those of some others has been inert. But as the doctor is not pleased with this liberty, which I have taken, politeness requires that I should recall what I have said of him. And in doing this, "should any severity of remark occur, I trust the doctor will acquit me of the most remote design to wound his sensibility, when I assure him, that I am influenced only by an earnest desire to elicit truth."

Then I do acknowledge, that "I have connected with doctor John Stearns's name, erroneous ideas of the Ergot;" because I find that Doctor Stearns was not the first who introduced Ergot into publick use. It has been a common remedy in France for half a century, and has been used by all the old women of the country; as will appear from a paper on that subject by M. Desgranges, a physician of Lyons, published in the number for January 1818, of the Noveau Journal de Médecine of Paris, Vol. I. p. 54. L. SPALDING.

[A translated abstract from the above named document.]

The pulvis parturians of the Americans is mentioned under the word SECALE, in James's Medical Dictionary, in which it is said to be in great credit for checking flooding after delivery. The same article is in great repute in Lyons, where, in the year 1777 Mons. Desgranges met with several midwives, who exhibited it to accelerate child birth. They used to grind it in a coffee mill, and gave of it, after decoction, a great quantity, grounds and all. In a quarter of an hour, a woman was delivered.

2. In the Journal de Physique, August, 1774, a lady, from Chaumont in the Vexia, testifies, that since her youth, she has known that the Ergot would accelerate parturiency; that her mother had administered it to several women. A tea-spoonful of the powder mixed with some water, tea, or broth, would

\* Vol. VII. page 216 of this Journal.

immediately procure delivery. Another midwife of that city had been twenty-five years in the same practice ; she had laid down rules for the use of Ergot, and had particularly directed, that it should not be given before the os uteri was dilated four or five lines. A third woman he knew at Lyons, who had practiced forty years, in whose possession, a great quantity of the Ergot was found, and kept for use.

3. Mons. Desgranges thinks that a famous Dutch Accoucheur called Rathlaw, mentioned in the work of Levret on Obstetrics, page 229, and who flourished in 1747, succeeded in terminating labour, at the second dose of a powder, which he thinks must have been the Ergot.

4. Mons. Desgranges asserts, that to his knowledge and recollection, the use of the Ergot has been known for forty-five years in the district called Vexia ; and in that of Lyons, it has been in the hands of empiricism, from time immemorial.

Read before the New York County Medical Society.

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*Extracts from a letter to AARON DEXTER, M.D. &c. &c.  
from DR. WILLIAM LYMAN.*

[Communicated for the New-England Journal of Medicine, &c.]

**T**H E following case I submit with respect, for your consideration.

I was called to a young woman on the 14th of January last. She was twenty seven years of age, of a good constitution—plethoric, and had enjoyed a good state of health through life. She had walked about one mile and a half (after sitting up by night as a watcher with a sick child) to her mother's. Soon after she returned home, she complained of an headache, pain in her limbs, stiffness through the body, and a great coldness ; her mother put her feet into warm water, and then put her into bed—jugs of hot water were placed at her feet and body, so as to excite heat ; and in two hours after this she complained of a pain and numbness in her feet, soon after there was a total loss of reason, attended with spasms pretty much on the left side of her body. In four hours from the attack I saw her in the situation above described, despaired of by her mother and friends. They considering it the *spotted fever*, so called. I found her pulse rather slow and hard, and considering her fullness, concluded to

bleed. Accordingly took from her arm eighteen ounces of blood. Then gave her the emet. tart. ten grains at least, after waiting four hours (as I gave it in small quantities, and that with much difficulty) she began to nauseate, and it occasioned her to puke four times. The next day, the 15th, I found her totally insensible—the spasms had subsided, but *Petechial* spots appeared on her body and limbs, I immediately shaved her head, and applied the cantharides, and vesicated completely; and the tincture of them was made use of by general friction on the limbs, and sinapisms were applied to her feet, her pulse were at about ninety in a minute. On the 16th, I found her the same: I continued the tincture of flies by general friction, likewise two blisters one on each leg were applied, and an injection together with the oil Ricini, which occasioned two motions of the bowels; I gave her for fever powders, soda, cal. camphor, four in twenty four hours. On the 17th continued the same kind of practice, and ordered souchong tea to be taken for her constant drink from the first. The *Petechia* began to disappear and the symptoms much more favourable, her pulse much as before. I gave her tinct. castor and camphor. On the 18th she had some reason, but appeared to be in much distress, and uneasy. The bowels were kept open by injections and ol. ricini. Her thirst was not much—19th, the free use of the cantharides appeared to affect the urinary passages. I ordered her a solution of g. arabic and slippery-elm. The soda and cal. powders were continued but not so often. On the 20th no apparent alteration. On the 21st, she had considerable reason, and could converse some. By the 25th, she could sit up in bed with support. For food she took beef tea and gruel. She had no recollection of her sickness, nor of any event, from her returning home, till this time. She now continued to convalesce gradually, with the assistance of the cinchona flav. serpentaria, the diluted sulphuric acid, and a more generous diet: and in about six weeks from the attack could sit up all day, and is at this time in good health.

I suppose the above case to be the spotted fever, so called. I will leave you and others, however, to judge: but complete success accrued from the mode of treatment.

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I BEG leave also to communicate to you the following case of Hydrocele for twenty four years under my care and attention.

Being applied to by a venerable and respectable gentleman in the year 1791, for advice and assistance in a case of Hydrocele of both testicles, which complaint he had been afflicted with, for some time, I observed to him that a radical cure might be effected by seton, or incision of the Tunica Vag. Testis, so as to excite inflammation and an adhesion of the same to the body of the testicles, which would prevent an accumulation of the fluid that constituted the disease. But as one of the testicles appeared to be somewhat undurated, and being fearful of a schirrous I declined any operation of that sort, but chose to abide by the palliative mode, by puncture, as he was naturally nervous, and of a timid disposition. I performed the operation of *Paracentesis* upon him four and sometimes five times in a year from the above period, until June 1815, amounting to one hundred operations. The quantity of water drawn off was nineteen gallons. I was obliged often to give him the bark and wine to support the system as he was frequently much debilitated. The scrotum was supported by a suspensory bandage, and a frequent application of the acetite of lead, as there were appearances of a *sphacelus*. He continued in good health by observing his regimen and moderate exercise, until August 1815, when by a fall which injured his back and leg, it debilitated his whole frame so much he sunk: his rational faculties continuing until within four hours of his death, when he expired with ease aged ninety-one years.

With great respect,  
your very humble servant,  
**WILLIAM LYMAN.**

York, Dec. 7, 1816.

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*Observations on Chronic Inflammation of the Brain and its Membranes.* By JOHN ABERCROMBIE, M.D. Fellow of the Royal College of Surgeons of Edinburgh.

[From the Edinburgh Medical and Surgical Journal.]

**T**HE most common diseases are the most important. Rare and singular affections may excite curiosity, but the real improvement of medical science will be best promoted by a faithful record of facts, calculated to illustrate those diseases which excite our daily interest by their frequency and their danger. Among these may justly be reckoned the affections of the Brain. In their varied forms, they meet us at every

age, and in every rank ; they often set at defiance our most powerful remedies ; and, after being rapidly fatal, they frequently leave in the important organ affected, so slight and imperfect traces of their nature, that we are only left to contemplate the fallacy of our doctrines, and the inefficiency of our most powerful remedies.

Diseases of the brain may be divided into three classes, the inflammatory, the apoplectic, and the organic. Active inflammation of the brain is in this country so uncommon, that some have doubted whether it really exists as an idiopathic disease. For this reason, I confine my observations to Chronic Inflammation. I include under this term all those affections of the brain, which, beginning with symptoms of an inflammatory nature, terminate either by suppuration or effusion, and I do not comprehend serous apoplexy, which, beginning with apoplectic symptoms, belongs to another branch of the subject. Those affections which I include under chronic inflammation, appear under various degrees of activity. Some of them are evidently examples of the pure scrofulous inflammation, while others approach to the characters of acute phrenitis, and on this account there may be some objection to the term. But as they pass into one another by almost insensible gradations, and are intimately allied in their symptoms and their terminations, and as none of them exhibit all the characters laid down by systematic writers as those of Phrenitis, it appears to me, that it will simplify the subject, if we consider them all under the general term Chronic Inflammation.

The reasons will appear in the sequel, which lead to believe, that the varied forms in which we meet with this affection are not different diseases, but different terminations of the same disease.

#### SECT. I.—SYMPTOMS OF CHRONIC INFLAMMATION OF THE BRAIN.

When we attend to the symptoms of chronic inflammation of the brain, we find them assuming various forms, which I think may be referred to four classes.

1. The first form of the disease most commonly affects children, but may also appear in adults. It is usually preceded for a day or two by languor and peevishness ; these are followed by an accession of fever, which is sometimes ushered in by severe shivering. The patient is oppressed, and unwilling to be disturbed, and complains of severe pain in some part of the head, with flushing of the face, and impatience of

light. In many cases there is frequent vomiting, which continues for the first day or two; in other cases, the vomiting is absent. The pain is felt in various parts of the head; frequently it extends along the neck, and even to the shoulders, and sometimes pain is complained of in the arms, and other parts of the body. The pupil is usually contracted; the eye morbidly sensible, and sometimes suffused; the tongue is generally white, but moist, sometimes quite clean; the sleep is disturbed by starting and frightful dreams, and frequently during sleep there is violent grinding of the teeth. The bowels are generally obstinate, but frequently they are natural, and I have seen the disease through its whole course attended by spontaneous diarrhoea. After some days, slight delirium begins to appear, at first transient, perhaps only observed during the night, or upon first awakening out of sleep, or, in some cases, the patient lies in a dosing state, and talking incoherently, but out of which he can be roused, so as to talk sensibly. In other cases, instead of delirium, there occurs a peculiar forgetfulness; the patient using one word instead of another, misnaming persons and things, mistaking the day, or the time of the day, or shewing in some similar manner a confusion of thought. Sometimes he is sensible of it, and appears anxious to correct the mistakes he has made. These symptoms are followed by a tendency to sleep, and this soon passes into coma. While these changes are going on, the pulse, which was at first frequent, usually falls to the natural standard, or below it; the pain becomes less violent; the eye loses its sensibility, becoming dull and vacant, often with squinting and double vision, and these are often succeeded by blindness and dilated pupil, even before the patient falls into perfect coma. The pulse having continued slow for some time, usually a day or two, sometimes but a few hours, begins to rise again, and rises to extreme frequency; it has been counted as high as 200 in the minute. It is through the whole course of the disease extremely unequal in frequency, varying perhaps every minute, or every time that it is counted. This remarkable inequality is not observed in other febrile diseases, except from some temporary cause, and is therefore a symptom which deserves much attention. The patient is now in a state of perfect coma, sometimes accompanied by paralysis of some of the limbs, sometimes by convulsive affections, and, after he has continued in this state for a few days, the disease is fatal. The duration of the complaint is extremely various; it is sometimes drawn out to three weeks, and sometimes, especially in young

children, it is fatal in five or six days. At some period of the disease, there is generally a remarkable remission of all the symptoms, which gives sanguine, but deceitful hopes of recovery ; it usually occurs, as the pulse is falling in frequency, or when it is beginning to rise after the slowness, and is the prelude to the coma. In some cases the slowness of the pulse does not occur, but it continues through the whole course of the disease of nearly uniform frequency.

In young children, who cannot describe their feelings, this form of the disease is characterized by fever, flushing, restlessness, and screaming, often with vomiting ; these symptoms are succeeded in a few days by stupor and squinting, the pulse coming down as the stupor appears. This falling of the pulse, while the child continues in a state of great oppression, approaching to coma, is often the first symptom that points out the character of the disease.

II. The second form I have observed most commonly in young persons towards the age of puberty, and upwards. It begins like a slight feverish disorder, and for a considerable time excites no alarm. There is slight headach, general uneasiness of the limbs, disturbed sleep, and impaired appetite ; the tongue is foul, and the pulse slightly frequent, probably from 96 to 100. After a few days, the complaint appears to be going off ; at our next visit, we are disappointed to find the patient again complaining, perhaps as much as at first. More active practice is then employed, and there is again appearance of amendment. The tongue perhaps becomes clean ; there is some appetite, and better sleep, but there is still some complaint of headach, which varies much in degree from one day to another, never severe, and never quite gone : the pulse continues a little frequent. Amid these remissions and aggravations, eight or ten days may pass before the disease has assumed any decided character. It is not perhaps before the sixth or seventh day that even an attentive observer begins to remark, that the degree of headach, though not severe, is greater, and more constant, than corresponds with the general symptoms of fever ; that the tongue is becoming clean, the appetite improving, and the pulse coming down, while the headach continues, with an unwillingness to be disturbed, and a degree of oppression, that is not accounted for by the degree of fever. In this way, the complaint may go on for several days more, till perhaps about the twelfth or fourteenth day, the pulse suddenly falls to the natural standard, or below it, while the headach is increased, with a tendency to stupor. This instantly marks a head affection of the most dangerous

character. The patient now lies for several days in a state of considerable stupor, sometimes with convulsion, often with squinting, and double vision. The pulse then begins to rise again, and about this time there is frequently a deceitful interval of apparent amendment; the stupor is lessened, the patient appears easy and intelligent, sometimes the squinting goes off, and the eye appears natural; but he soon relapses into perfect coma, and dies in three or four days. The duration of the complaint is uncertain; it may be drawn out to five or six weeks, or it may be fatal in two or three. When this form of the disease attacks infants, they are first observed to be languid, and oppressed, with bad appetite, and disturbed sleep. There is often a disordered state of the bowels, and to this cause the symptoms are ascribed. There is no urgent symptom, and no alarm is excited till, after eight or ten days, the pulse is found at 70 or 60, the pupil dilated, the eye fixed and vacant, and the child oppressed, tending to stupor. These symptoms are soon followed by coma, with squinting, and in a few days by death.

III. The third form of the disease I have usually observed in adults. It begins with violent headach, without fever. The patient is found in bed, lying oppressed, and unwilling to be disturbed, or tossing about from the violence of the pain. The pulse is about the natural standard, or below it, frequently about 60. The face is in some cases flushed, in others rather pale. In some cases the eye is natural, in others, there is impatience of light, with contracted pupil. The pain is usually very acute, and deep-seated, and is referred to various parts of the head—frequently it seems to shoot from temple to temple—and sometimes it is referred to the ear. There is a look of much oppression, and in some cases vomiting. Sometimes delirium appears at an early period, varying in degree from day to day, until, after six or seven days, it passes into fatal coma, the pulse having continued through the whole course of the disease from 70 to 80. In other cases, the pulse is at first about the natural standard, afterwards falls to 60 or 50, and at last rises to 120 or 130. In some cases, the vision is not affected; in others squinting, and double vision occur; and sometimes these symptoms, after continuing a day or two, disappear, not to return; the disease, notwithstanding, going on to a fatal termination. There is in every case more or less delirium, but often slight and transient. Sometimes the patient lies in a dosing state, with incoherent muttering, but can be roused to talk sensibly. This condition, when not accompanied by fever, is always

characteristic of a dangerous affection of the head. There is frequently observed, that peculiar forgetfulness, and confusion of thought, which I have already mentioned, and which I think is different from any thing that occurs in continued fever. Sometimes the speech is affected, and this may be either difficulty of articulation, or a hesitation, from the patient not being able to recollect the word which he meant to make use of. There is generally towards the end more or less coma; in some cases, it continues three or four days; in others not above twelve hours, and sometimes the disease is fatal without perfect coma,—the patient being able to answer questions distinctly, a very short time before his death.

IV. In another and very frequent form of the disease, the first symptom that excites alarm is a sudden and violent attack of convulsion. This in some cases occurs without any previous illness; in others, it is preceded by slight complaints, which had attracted little attention. In one case, which will be described, it was preceded by frequent vomiting, which had continued a fortnight; in another, by headache for several days. The convulsion is generally long and severe. In some cases, it is followed immediately by coma, which in a few days is fatal. In other cases, the convulsion recurs frequently at short intervals, the patient in the intervals complaining of headache, and after twelve or twenty-four hours, passes into coma. Sometimes after the coma has continued a considerable time, perhaps twelve hours, there is complete recovery from it, and for several days the patient appears to be in the most favourable state, when, without any warning, the convulsion returns, and terminates in fatal coma. In some cases, the convulsion is confined to one side of the body, or to one extremity; and is usually followed by paralysis of the part affected, the disease in the end passing into coma.

Much observation is required to put us fully on our guard against the deceitful appearances of amendment that take place in all the forms of this disease. Even in those which have assumed the most formidable aspect, every alarming symptom may subside. The pulse perhaps continues frequent, but it also is coming down; at our successive visits, we find it falling regularly, and we are disposed to hope, that a few days will bring the case to a favourable termination. During this deceitful interval, which may continue several days, I have known a parent tell the medical attendant, that his farther visits were unnecessary; and I have known a physician take his leave, considering his patient as convalescent. As the pulse falls, the patient is disposed to sleep—this is perhaps considered as favourable—it falls to the natural standard; “he sleeps

almost constantly," and in another day, this sleep terminates in coma. The pulse then begins to rise again, rises to extreme frequency, and in a few days more the patient dies. All this may go on with little or no complaint of the head, and without any symptom that will lead a superficial observer to suspect danger, till he finds his patient glide into coma, at the very time when he expects recovery; for the period when the pulse falls to the natural standard, is the time when the coma becomes evident, and the situation of the patient probably hopeless. Whenever, therefore, at any period of a febrile disorder, there have been remarkable symptoms in the head, such as violent headache, with vomiting, and impatience of light, stupor, convulsive affections, or affections of the sight, though these symptoms have entirely subsided, and the complaint again has assumed the appearance of simple fever, we must not consider the danger as over, but must be on our guard against the period of danger that is still before us. An attentive observer may generally remark, in such cases, something which leads him to suspect that the appearance of amendment is deceitful. Sometimes there is a dilated state of the pupil, giving to the eye a peculiar expression; sometimes a remarkable tendency to sleep: frequently something unusual may be observed in the patient's manner, such as fretfulness and querulousness, which are not natural to him; a quick and hurried way of speaking, or, on the contrary, a remarkable slowness of speech; difficult articulation, or a peculiar confusion of thought and forgetfulness on particular subjects; but it cannot be too strongly impressed upon the younger part of the profession, that cases occur, in which all these symptoms are wanting, and in which the patient appears for several days to be in the most favourable way of recovery, while, in fact, his disease is advancing rapidly to a fatal termination.

Chronic inflammation of the brain is not always an idiopathic disease. It often takes place in the course of other diseases, the most common of which are continued fever, scarlatina, measles, pneumonia, phthisis, and diseases of the kidneys. It may be useful, therefore, to keep in view those symptoms which, in the course of any disease, indicate a tendency to this dangerous affection of the brain. They are chiefly the following; in the *head*, violent headach, with throbbing, giddiness, tinnitus, sense of weight and fulness, stupor, a great propensity to sleep—in the *eye*, impatience of light, unusual contraction or dilatation of the pupil, blindness, double vision, squinting, distortion of the eyes outwards, paralysis of the muscles of the eyelids, producing, according to the

muscle that is affected, either a shut eye, or a gaping eye, transient attacks of blindness, or double vision, objects seen that do not exist, a long-sighted person suddenly recovering distinct vision; in the *ear*, transient attacks of deafness, great noise in the ear, unusual acuteness of hearing; in the *speech*, indistinct or difficult articulation, unusual quickness of speech, or unusual slowness; in the *pulse*, slowness, and remarkable variations in frequency; in the *mind*, high delirium, transient fits of incoherence, peculiar confusion of thought and forgetfulness on particular topics; in the *muscles*, paralytic and convulsive affections, sometimes confined to one limb, or part of a limb; in the *urine*, there frequently occurs a remarkable diminution of the secretion, sometimes nearly amounting to suspension of it; and connected with this diminution, there is often a frequent desire to pass urine, occasioned probably by an increased acrimony, as the quantity diminishes. Of as great importance as any particular symptom, is attention to the correspondence of the symptoms: Thus, the peculiar oppression which accompanies a high degree of fever, is familiar to every one, and is not reckoned an unfavourable symptom;—the same degree of oppression occurring without fever, or with very slight fever, would indicate a head affection of the most dangerous character. In the same manner, a degree of headache and of delirium, which, accompanying a high degree of fever, would be considered as symptomatic, accompanying slight fever, would indicate a dangerous affection of the brain.

The TERMINATIONS of chronic inflammation of the brain may be referred to the following heads.

1. The disease may be fatal in the inflammatory stage.
2. *Serous effusion.* This may take place either in the ventricles or on the surface. When it is in the ventricles, it generally is found in all of them, owing to their free communication with each other. On the surface, it is generally between the pia mater and the arachnoid membrane, elevating the latter, so as, from its extreme tenuity, to impart to the effusion a gelatinous appearance; it may also occur between the arachnoid membrane and the dura mater, and this is probably the source of the fluid which is often found in the base of the cranium, after the brain is removed. There is reason to suppose, that, in some cases, it is also formed between the dura mater and the bone, and that this may be the source of the fluid which often escapes in considerable quantity while the cranium is opened.

3. *Suppuration.* This also occurs in various situations. Sometimes an extensive portion of the brain, perhaps nearly a whole hemisphere, is found broken down into a soft corrupted mass, in which soft cerebral substance is mixed with purulent matter. In other cases, the pus is in a circumscribed abscess, lined by a sac of coagulable lymph. Sometimes it is found in the ventricles, and frequently upon the surface betwixt the membranes. Abscess of the cerebellum is a frequent appearance, and an example will be given of abscess in the medulla oblongata.

4. *A peculiar destruction or disorganization of the central parts of the brain,*—the fornix, septum lucidum, and the white medullary matter which lines the ventricles. This I consider as an appearance of very great importance, and one which, perhaps, has been too little attended to. It consists of those parts being broken down into a white soft pulpy mass, retaining their natural colour, but losing their figure and consistence, so that the fornix cannot be raised, and the septum lucidum is found perforated by a large ragged opening. This appearance I have generally observed in those cases in which there has been severe and deep-seated pain. It is often combined with the deposition of coagulable lymph in the immediate vicinity of the parts affected, as, on the upper surface of the cerebellum, it is often combined with suppuration in other parts of the brain, very often with serous effusion in the ventricles; and I think there is no reason to doubt that it is the termination of inflammation of these central parts, probably a modification of suppuration, and deriving its peculiar character from their particular structure. I see no other principle on which we can explain it, except we suppose it to be produced by the distention of parts which arises from the effusion, and that this is not the source of it, appears from this fact, that it is met with in cases in which there is no effusion.

5. *Deposition of coagulable lymph.* This may either appear, forming an adventitious membrane on the surface of the pia mater, or in a soft and gelatinous state in various parts, especially about the medulla oblongata, which is sometimes found imbedded in it.

6. Thickening of the membranes, contraction of the sinuses, caries of the bones, and other affections of external parts, which will be more particularly referred to in the sequel.

In the pathology of this affection, too much attention has perhaps been directed to the serous effusion, or hydrocepha-

luis, as if this alone constituted the disease. This effusion is probably to be considered as one of the many terminations of chronic inflammation of the brain. Some of the other terminations are scarcely less frequent, particularly that peculiar destruction of the central parts, to which I have alluded, and with which the effusion is found to be combined, in a very great proportion of the ordinary cases of hydrocephalus; other cases, in which the symptoms closely resemble those of hydrocephalus, will be found to terminate by extensive undefined suppuration, or by this, combined with effusion, or with the destruction of the central parts. In fact, we do not often meet with any one of the terminations uncombined, and it is very difficult to anticipate from the symptoms, in what manner the disease is to terminate, or has terminated in a particular case. Serous effusion, uncombined with any other morbid appearance, I have generally observed in that which I have described as the second form of the disease, in which the symptoms are very slow and insidious in their progress, and at no period exhibit much activity. In those cases in which the pain is more severe, and all the symptoms more acute and more violent, I have commonly found either effusion combined with the destruction of the central parts, or undefined suppuration. In that which I have described as the fourth form of the disease, I have commonly observed either the encysted abscess, or the deposition of an adventitious membrane, on the surface of the pia mater. But these terminations are often combined with one another, and all of them are generally combined with more or less serous effusion. On what these varieties depend is very much matter of conjecture, probably on the seat of the disease. The superficial adventitious membrane probably arises from inflammation of the pia mater, and the destruction of the fornix and septum lucidum from inflammation of these parts. The same appearance is observed in the inner surface of the ventricles, but in some cases suppuration is observed there also. The cortical or cineritious part would appear to be the most frequent seat of suppuration, but it is by no means confined to this structure; and upon the whole this part of the subject is little better than conjecture.

## SECT. II.—EXAMPLES OF THE PRINCIPAL FORMS AND TERMINATIONS OF THE DISEASE.

The various forms of disease which have been described in the preceding section, exhibit a general view of the symptoms

of chronic inflammation of the brain. The morbid condition with which they are connected, I believe to be primarily the same in all of them, but the symptoms are modified by a variety of circumstances, the particular effect of which has not been fully investigated. These circumstances may be chiefly referred to three heads, the constitution of the patient, the seat of the disease, and the mode of its termination. 1. They are modified by the constitution of the patient, as from this source they probably derive their character in regard to activity, in one case approaching to the nature of acute phrenitis, in another, consisting of the pure scrofulous inflammation, with the smallest degree of activity, and in others forming numerous modifications, by which these two extreme cases are connected together by almost insensible gradations. 2. They are probably modified by the seat of the disease. We have reason to believe that, in this respect, there are considerable varieties; that the inflammation may be seated in the deep or central parts of the brain—in the substance of the hemispheres—in the membranes—in the cerebellum—in the medulla oblongata, &c. The effects of these varieties remain to be investigated; but they form a very difficult subject of investigation, from the difficulty of ascertaining what part was really the seat of the inflammation, and from the facility with which it may pass from one part to another. 3. The varieties of termination present sources of difference not less interesting than the former, and more within the reach of observation. These varieties have already been alluded to; the disease may be fatal in the inflammatory stage,—it may terminate by serous effusion—by suppuration—by deposition of new matter on the surface—by a peculiar disorganization of the central parts, and by various combinations of these terminations. It may be of some use towards illustrating this most important and dangerous disorder, if I describe a selection of cases, calculated to exemplify the principal varieties in the symptoms and terminations, and some of the more remarkable differences in the seat of the disease.

#### I.—*The disease fatal in the inflammatory stage.*

CASE 1.—A woman, aged 26, had laboured under bad health, in a variety of forms, for eighteen months before her death. Her complaints began with a severe headache and frequent attacks of convulsion. After some time these complaints subsided, and she was seized with cough, haemoptysis, quick and laborious breathing, and scarcity of urine. The complaints of

her breathing came on in paroxysms, during which her respiration was 80 or 90 in the minute, and sometimes continued nearly in this state for several days together. Her pulse was constantly frequent. After she had suffered for many months from these complaints they subsided entirely, without any obvious cause. She then became affected with violent paroxysms of pain in the abdomen, dysuria, and vomiting. The pain was principally in the right side of the abdomen, which was swelled, tense, and painful upon pressure, and the paroxysms were succeeded by copious discharges of puriform fluid by the vagina. There was a temporary alleviation of the pain after every discharge of this fluid. The last time I saw her, which was a few weeks before her death, there was a general swelling and hardness occupying the whole right side of the abdomen, extremely tender to the touch, and conveying the impression of extensive organic disease. I did not see her in the fatal attack, which was in the head. It began with severe headach, impatience of light, and fever; these were succeeded by convulsion, and this by coma, and she died comatose, about a week after the appearance of these symptoms. On dissection, I found the surface of the brain, in many places, of a dark red colour. This appearance extended in some places to the depth of an inch into the substance of the brain, and it was principally observed on the upper and anterior parts of both hemispheres; and on the posterior part of the left hemisphere. The parts so effected were softer than the other parts of the brain, and appeared to be more vascular, for drops of blood exuded from them when they were cut. The internal parts of the brain were sound, and there was no serous effusion. The longitudinal sinus, near its posterior part, was thickened in its coats so as considerably to diminish its area. The hardness of the abdomen, which was so remarkable a short time before death, had disappeared, and not a vestige of disease could be detected in any of the viscera of the thorax, abdomen, or pelvis.

## II.—*Serous effusion.*

CASE 2.—A boy, aged 9, was affected with slight headach, foul tongue, bad appetite, and disturbed sleep. Pulse from 96 to 100. He was not at first confined to bed, and the complaint excited little attention. The first week of his illness was passed with these slight symptoms; he was one day better, and another rather worse; his headach sometimes gone for great part of a day, and never severe. Towards the end of the

second week there appeared to be a want of correspondence in the symptoms, the headach being greater and more permanent than accorded with the degree of fever; but even on the 13th and 14th days, the complaint had still much the appearance of mild continued fever, and was considered in that light by a practitioner of the first eminence. During the second week, however, the headach had become more severe, while the other febrile symptoms had been diminishing. On the fifteenth day the pulse sunk rather suddenly to 70, and the headach was increased. On the sixteenth day there was a slight convulsion. On the seventeenth there was coma, with some squinting; the pulse below the natural standard. On the eighteenth the pulse began to rise, and the coma was diminished. On the nineteenth and twentieth he was distinct and intelligent; tongue clean; some appetite; pulse 96. On the following day his appearance was less favourable. He then sunk gradually into coma, with squinting, and died about the thirtieth day of the disease. The pulse had risen to 120, and in the last week there had been some light return of convolution. On dissection, all the ventricles of the brain were found distended with clear serous fluid. There was no other morbid appearance, except considerable turgidity of vessels on the surface of the brain.

CASE 3.—Mr. M. aged 24, was affected with slight headach, with unusual listlessness and indolence. He ascribed the complaint to cold, and for the first week continued to attend to his business. In the second week he had considerable headach, shivering, debility, bad appetite, foul tongue, and disturbed sleep. Pulse about 112. Towards the end of this week his friends observed once or twice a slight and peculiar forgetfulness. In the third week his pulse came down rapidly to 72; his tongue became clean; he made little or no complaint of his head, but there was occasionally a degree of incoherence, which was slight and transient, and a singular forgetfulness on particular subjects, which was observed by his friends, but did not appear in his intercourse with his medical attendants. The pulse continued slow for two days, and then rose rapidly to 130, with increase of the delirium. After a few days more the delirium again subsided, and his attendants entertained hopes of his recovery; but it soon returned, and was rapidly followed by blindness, coma, and death. He died about the middle of the fourth week of his illness. I did not see him during his life. I examined his body, and found all the ventricles of the brain

distended with serum. There was no other morbid appearance.

### III.—*Peculiar destruction of the central parts of the brain, without effusion.*

CASE 4.—Mrs. R. aged about 30, (18th June 1816,) was affected with violent pain of the head, which extended across from temple to temple. She was extremely restless, and tossing from one side of the bed to the other, owing to the intensity of the pain; eyes slightly suffused, and impatient of light; pupils contracted; pulse 60, soft, and rather weak; tongue white; had been ill several days.

She was bled copiously and repeatedly. Used strong purgatives; cold applications to the head; blistering, and topical bleeding.

For three days she appeared much relieved; the violent pain was removed; she complained only of pain when she moved her head. Pulse from 80 to 90. She was quite sensible, but considerably oppressed, and inclined to lie without being disturbed. On the 22d her speech was affected; she was sensible of it herself, and said she "felt a difficulty in getting out her words." Pulse 112.

23d, 24th.—Increasing stupor, and at times incoherence; but when roused, answered questions distinctly. Double vision; made no complaint; said her head was better. Pulse from 112 to 120.

25th.—Increasing stupor; pulse less frequent.

26th.—Complete coma; dilated pupil. Pulse 108, of good strength.

Died in the night. More blood-letting, general and topical, mercury, &c. had been used without benefit.

*Dissection.* The fornix and septum lucidum were broken down into a soft white pulpy mass. There was no effusion in the ventricles; and the other parts of the brain appeared to be in the most healthy state.

### IV.—*Peculiar destruction of the central parts, combined with effusion.*

CASE 5.—J. N. a stout young man, aged 20, (18th September 1814,) was affected with violent headache, extreme restlessness, and some delirium; face flushed; pulse 60. Had been unwell so as to keep the house for a week, but only oc-

casionally in bed; symptoms much increased for two days. Pulse on the former days had been from 80 to 90.

19th, 20th.—No improvement; violent headache; a good deal of delirium. Pulse from 75 to 80. Large and repeated blood-letting, cold applications, blistering, purging, &c. were employed.

21st, 22d.—Headach easier; less delirium; pulse 80.

23d, 24th.—Continued better. Pulse from 80 to 84.

25th.—A tendency to stupor; began not to know those about him.

27th.—The stupor had increased to perfect coma, in which state he lay for four days, and died. His pulse had continued from 75 to 84.

*Dissection.*—Much effusion in the ventricles, and a good deal found in the base of the skull. The fornix was broken down into a shapeless mass of white pulpy matter. From similar destruction a large opening had been formed in the septum lucidum, and the cerebral substance, forming the inner surface of the lateral ventricles, had the same soft pulpy appearance. There was considerable deposition of coagulable lymph on the upper surface of the cerebellum.

**CASE 6.**—D. G. a printer, aged 21, (3d September 1816,) was affected with violent headach and impatience of light; frequent vomiting; had an oppressed look, with unfixed expression of his eyes. Pulse 70, and strong. Tongue clean. Had been ill six days; for three days had vomited almost every thing he had taken.

Large bloodletting, purging, blistering, &c. were employed, and afterwards mercury, and an issue in the neck.

4th.—Vomiting abated; headach relieved; pulse 54.

5th.—Pulse 56; headach much relieved; no vomiting.

7th.—No headach; eyes bore the light; look natural; pulse 48; double vision occasionally, not constant.

9th.—Sitting up, and dressed; pulse 60; no pain; constant double vision; tongue clean; some appetite.

10th.—Vision natural; in other respects as before.

11th.—Pulse 96. Made no complaint; but his look was vacant, and the pupils dilated; and there had been some delirium in the night; tongue clean; bowels open; vision natural.

12th.—Pulse 96. Considerable delirium; no complaint of his head; vision natural.

13th.—Increasing stupor.

14th.—Perfect coma. Pulse 120.

15th.—Died.

*Dissection.*—All the ventricles were distended with fluid. The fornix was broken down into a soft pulpy mass, which could not be raised ; other parts of the brain healthy.

### V.—*Suppuration without effusion.*

CASE 7.—A girl, aged 11, thin and delicate, after having complained for some days of headach, was seized on the 11th of January 1817 with convulsion, which continued about half an hour. I saw her on the 12th, and found her affected with severe headach and paralysis of the right arm, which had taken place immediately after the convulsion. The pulse was 100 ; the tongue foul ; the face rather pale ; and the eyes languid. Being bled from the arm and purged, and cold being applied to the head, she was much relieved. On the 13th the pulse was natural ; the pain much abated, and she recovered considerable motion of the arm. On the 15th, the headach being increased and the arm more paralytic, she was bled again ; and, on the 17th, she was much relieved ; pulse natural, and the motion of the arm much improved. On the 18th, after being affected with increase of headach and some vomiting, she became convulsed ; the convulsion was confined to the head and the right arm ; the former was drawn towards the right side, with rolling motion of the eyes ; the arm was in constant and violent motion. Pulse 100. She was sensible, and complained of her head. Being bled to  $\frac{3}{4}$ vijj, the convulsion ceased instantly, and the headach was relieved, but the right arm was left in a state of complete paralysis. 19th and 20th, the arm had recovered a little motion. Some headach continued, with occasional vomiting. Pulse 60. On the three following days the same convulsive motion returned several times. It now did not affect the head or face, but was confined to the right arm, which was then left in a state of permanent paralysis. Hitherto no other part of the body had been affected by the convulsion, but on the 24th, the right thigh and leg were affected by it, and remained in a state of paralysis. Pulse 60. The usual remedies, bleeding, purging, blistering, &c. had been employed with activity, without any effect in arresting the progress of the disease. The right thigh and leg now went through a course similar to that described in the arm ; and, on the 29th, remained in a state of permanent paralysis. When the convulsion first began to affect the leg, the arm was affected at the same time, but afterwards it was confined to the thigh and leg, the arm remaining motion-

less. February 4th, Complete paralysis of the right side; continued quite sensible. Pulse from 50 to 60; no return of convulsion; little complaint.

She now continued for several days without any change; except the paralysis of the right side, every function was natural. She was quite sensible; appetite good. Pulse and vision natural, and she made little complaint. She was, however, inclined to lie without being disturbed, and gradually became more oppressed. On the 11th this had increased to perfect coma, in which she continued for three days, and died on the 14th.

*Dissection.*—In the upper part of the left hemisphere of the brain, there were two abscesses, containing together from 6 to 8 ounces of very fetid pus. They had no communication with each other, nor with the ventricle. The one was in the anterior part of the hemisphere, very near the surface; and the other immediately behind it, separated by a thin septum of firm white matter; a similar white matter formed the lining of the abscesses. In the posterior part of the right hemisphere, there was a small abscess containing probably half an ounce of pus. There was no serous effusion in any part of the brain, and no other morbid appearance.

## VI.—*Suppuration combined with serous effusion.*

CASE 8.—Mr. C. aged 18, had been for many years affected with a considerable degree of deafness, and had been liable to suppuration of the ears. In 1810 he was affected with a chronic abscess behind the left ear, by which a probe could be passed to a great depth into the cells of the mastoid process. This sore discharged for more than a year, and then healed, leaving a deep cicatrix. From this time he was liable to headache, which became more severe in the beginning of 1813.

May 14, 1813.—After being for some days languid and complaining a little of his head, he was seized with severe headache and frequent vomiting; was much oppressed, and disposed to lie in a dosing state without being disturbed. Pulse 60.

He was treated by large and repeated blood-letting, purging, topical bleeding, blistering, and then mercury.

15th.—Vomiting abated; headache violent; pulse 60. Several severe attacks of shivering; was oppressed, and disposed to sleep, but sensible; eyes natural.

16th.—Headache relieved; increasing oppression.

From that time there was a partial stupor, with much talking, which was generally coherent. Pulse very variable; varying in a few minutes from 80 to 120. He died on the 22d, rather unexpectedly, without perfect coma. He had continued to know those about him till 12 hours before his death. His sight continued natural, except on the last day of his life, when he appeared to be blind. There had been no paralytic symptom and no convulsive affection.

*Dissection.*—The right hemisphere of the brain, to about half its depth, was reduced to a mass of fetid pus. In the centre it was fluid, and towards the external parts of a pulpy consistence. In this mass there appeared some small coagula of blood, and all the ventricles contained a considerable quantity of bloody serum.

## VII.—*The peculiar destruction of the central parts combined with suppuration.*

CASE 9.—Mr. D. aged 18, (July 10, 1815,) was affected with violent headache, extending along the upper and back parts of the head, and very severe in the neck, where it was much increased by the motion of the head. Much oppression; pulse natural; face rather pale; tongue clean; eyes natural. Had been ill three days; and the complaint had commenced with shivering; had been many years affected with deafness, and liable to suppuration of the ears.

The usual practice was employed, general and topical blood-letting, purging, blistering, &c.

The bleeding gave great relief at each repetition of it, and the blood was buffy, but the relief was transient. On the 13th he had squinting and double vision, which continued on the 14th, but then went off, and did not return. The headache continued, with many variations in degree; sometimes he made little complaint, at other times he was in violent pain. There was sometimes a degree of delirium, but it was slight and transient. There was much oppression, but no coma. He died on the 17th very suddenly. At my last visit he raised himself in bed with little assistance, answered questions distinctly and correctly, and knew every person about him; sight natural; pulse 60; died a few minutes after I had left the house.

*Dissection.*—The whole of the posterior part of the right hemisphere was one mass of undefined suppuration, and the fornix was broken down into a soft pulpy mass. There was considerable deposition of coagulable lymph on the surface of

the brain in several places, especially under the anterior lobes. There was a very small quantity of fluid in the ventricles. There was in the substance of the brain, near its base, a small tumour of an ash colour, which contained a cheesy mater, approaching to suppuration. A portion of the dura mater covering the temporal bone, behind the auditory portion, was thickened and spongy ; and there was a slight appearance of caries in the portion of bone with which the diseased membrane was connected.

### VIII.—*Suppuration with extravasated Blood.*

CASE 10.—A man, aged 40, had complained for two months of frequent pain and throbbing of the left side of his head. In March 1814, he began to be affected with convulsive motions of the right arm and leg. These attacked him in paroxysms, which usually continued about a minute, leaving him in the intervals, able for his usual employment. After blood-letting and purging, these paroxysms became less frequent, and after eight or ten days ceased. He was then affected with giddiness and confusion of thought, and a considerable torpor of the right side ; after some time, this came to be attended with motions in the right arm and leg, exactly resembling those of chorea. The muscular power of these parts was at the same time diminished, and at the end of two months from the first appearance of the spasmodic affections, they became completely paralytic. His pulse had continued quite natural. His speech was then affected, being first inarticulate, and gradually lost, so that after the middle of June he never was able to articulate a word. About this time his pulse began, for the first time, to be a little frequent, and he passed his faeces and urine involuntarily, but his mental faculties seemed to be entire. He took food when it was offered to him, and put out his tongue when desired. His eye was natural, and the expression of it intelligent. His sight and hearing appeared to be perfect, but he never attempted to speak. He often screamed as from pain, at the same time laying his hand on his forehead, and frequently shed tears. He continued in this state till the end of July, when he became comatose, and died in three days.

*Dissection.*—On removing the dura mater, the left hemisphere of the brain felt soft and fluctuating through its whole extent like a bag of fluid. On cutting into it, through about half an inch in thickness of sound cerebral substance, the remainder of the hemisphere was found nearly reduced to a bag

of purulent matter ; where it was not in this state, the cerebral substance was reduced to a soft pulpy mass. From this mass of disease, the ventricle was separated merely by the pia mater covering its inner surface, and it contained a very small quantity of serous fluid. In the substance of the left thalamus nervi optici, there was a coagulum of blood the size of a walnut.

**IX.—Suppuration of the Cerebellum, combined with effusion in the Brain.**

**CASE 11.**—Miss C. aged 18, on the 4th of March 1813, was seized with the ordinary symptoms of inflammation of the bowels. The inflammatory symptoms were subdued by two full bleedings, but the bowels continued very obstinate, and were not moved in a satisfactory manner till the 12th. During this period, a variety of purgatives had been given, with repeated injections of tobacco ; and by calomel, given as a purgative, her mouth had been affected as early as the 7th.

From the beginning of the attack she had been affected with pain in the left ear, and, about the 7th, began to complain of headache. This was at first slight, and, amid the urgency of her other complaints, excited little attention. It increased, however, and on the 11th had become very violent. She then lay pressing her temples with her hands, and screaming from pain. The pulse at this time was natural ; she was free from vomiting, and uneasiness of the bowels. On the 11th, there was a considerable discharge of matter from the left ear. On the 13th the pulse rose suddenly to 160, and there was such a degree of sinking as required the use of wine. The pulse soon subsided again, so that on the evening of the 14th it was at 80, and on the 15th at 60. The headache continued unabated. On the 14th there was a tendency to coma, which was increased on the 15th, with dilatation of the pupils. There was little room for active practice ; topical bleeding, blistering, &c. were employed without relief. On the 16th, the pulse began to rise again, but was very variable, varying in the course of a few minutes from 80 to 120. She lay in a state of great oppression, but when roused, knew all those about her, and talked sensibly ; headache still severe.

18.—Lost the power of swallowing ; often asked for drink, and was nearly suffocated in the attempt. Pulse from 90 to 150.

19.—Squinting and dilated pupil. Pulse from 96 to 160.

20.—Squinting increased; swallowed a little once or twice with an effort; at other times was nearly suffocated in attempting it; was still quite sensible when roused, and complained of violent headach. Sunk gradually, and died on the 22d. Continued sensible when roused, and knew those about her, till within an hour or two of her death. She also retained the sense of vision, though the pupils were much dilated.

*Dissection.*—The surface of the brain was natural: the substance shewed marks of increased vascularity, and the ventricles were distended with colourless fluid. The left lobe of the cerebellum was entirely converted into a bag of purulent matter, of a greenish colour, and intolerable fetor. It was contained in a soft and organized sac, which appeared to have been recently formed. A portion of the dura mater, on the outer side of the abscess, was thickened, and spongy; the bone was sound. The caput coli, and about eighteen inches of the extremity of the ileum, were of a dark livid colour, but sound in their structure.

**CASE 12.**—A girl, aged 9, was liable to attacks of suppuration of the ear, which were usually preceded by severe pain, and some fever. She suffered one of these attacks in the left ear in July 1810, in which she was not, as formerly, relieved by the discharge of matter, but continued to be affected with pain, which extended over the forehead. In consequence of this, I saw her, for the first time, on the day in which the discharge took place, and found her affected with pain across the forehead, impatience of light, and some vomiting; her look was oppressed; the pulse 84.

Blood-letting, purging, blistering, and mercury, were employed without relief.

On the 2d day the pulse was 60; and on the 3d there was slight and transient delirium, a degree of stupor, and once slight convulsion. She complained once or twice of pain in the back of the head, but her chief complaint was always of the forehead. She lay constantly with both her hands pressed upon the forehead, and moaning with this pain, of which there had not been the least alleviation. 4th day, pulse from 80 to 86; no change in the symptoms; oppression, but no coma. 5th, Continued sensible, and died suddenly in the afternoon, without either squinting, blindness, or coma, and the pulse having continued under 90. The left ear had

continued to discharge matter, and an opening had formed behind the external ear, from which also there was a purulent discharge.

*Dissection.*—A considerable quantity of colourless serum was found in the ventricles of the brain. The brain was in other respects healthy. In the left lobe of the cerebellum, there was an abscess of considerable extent, containing purulent matter of intolerable fetor. The dura mater, where it covered this part of the cerebellum, was thickened and spongy, and the bone corresponding to this portion was soft and slightly carious on its inner surface, but there was no communication with the cavity of the ear. The opening behind the ear merely passed behind the external ear, and communicated with external meatus.

#### X.—*Deposition of new matter on the surface of the Brain.*

CASE 13.—A boy, aged 11, had been for about a fortnight remarkably listless and inactive, and affected with frequent vomiting. The vomiting had recurred every day, sometimes several times in the day; his bowels were costive, but he complained of no pain, and was free from fever. In the evening of 29th June 1816, he was seized with violent convulsion, which recurred repeatedly. In the intervals he had severe vomiting, and complained of headach. Pulse 60. The convulsion recurred frequently through the following night; in the intervals, he complained that he could not see. Towards the morning, the convulsion ceased, and left him in profound coma. The coma continued till mid-day on the 30th, when it began to abate, after he had been freely purged. In the evening he was quite sensible, and complained of headach. Pulse 120.

July 1st.—The ordinary round of practice having been adopted, he was much relieved; no headach; no vomiting; tongue moist. Pulse 120.

2d.—Pulse 108. No complaint; much disposed to sleep; pupils rather dilated.

3d.—Pulse 112. No complaint; appearance much improved; eye natural; bowels open; tongue clean; no unusual drowsiness.

4th.—Pulse 108. Functions natural; a good deal disposed to sleep.

5th.—Pulse 70; had an attack of vomiting, and complained violently of his head; afterwards sunk into a degree of stupor; was sensible when roused, but impatient of being disturbed;

complained much of his head ; eyes natural ; repeated vomiting.

6th.—Perfect coma, with frequent convolution ; pulse from 120 to 160 ; he frequently lay with one hand pressing his forehead, and the other on the lower part of the occiput, as if he felt pain at both these places.

7th.—In profound coma the whole day. Died in the night.

*Dissection.*—On raising the dura mater, the surface of the brain had in many places the appearance as if purulent matter was confined under the arachnoid coat. On raising this membrane, however, the appearance was found not to be owing to pus, but to a layer of firm yellow substance which lay betwixt the arachnoid coat and the pia mater. It was in general of the thickness of a smooth shilling ; some portions were thicker, and in some places masses of it of considerable thickness lay betwixt the convolutions. There was also a good deal of it between the hemispheres, which were partially glued together by it. The principal seats of this appearance were the anterior part of both hemispheres, the inferior surface of the brain, especially in the depressions between the lobes, and nearly the whole surface of the cerebellum. On the posterior parts of the brain, where this membrane was wanting, the pia mater was evidently inflamed. The surface of the brain at these places had also an inflamed appearance, but it did not penetrate into its substance. The central parts were healthy ; there was no effusion in the ventricles ; some fluid was found in the base of the cranium after the brain was removed.

CASE 14.—A girl, aged 9, awoke suddenly in the night of 20th September 1817, screaming with violent headache, and exclaiming that some person had given her a blow on the head.

21st.—She complained of pain of the forehead ; but she was not in bed, and the pain was not severe.

22d.—Little change ; partly in bed, and complaining of headache, but the complaint excited no alarm.

23d.—Was seized with violent and long-continued convolution, which was immediately succeeded by profound coma.

24th.—I saw her for the first time ; found her in perfect coma ; the eyelids open ; the eyes distorted upwards ; pulse natural. Continued in the same state on the 25th, and died on the 26th.

*Dissection.*—On removing the dura mater, the surface of the brain appeared highly vascular, as if inflamed, except

where it was covered by a layer of solid matter, of a yellow colour, spread out betwixt the arachnoid membrane and the pia mater. This substance was distributed in irregular patches over various parts of the surface of the brain, but was most abundant on the upper part of the right hemisphere. There was also a considerable quantity of it on the surface of the cerebellum. It was in general of the thickness of an old shilling, and in some places it extended down betwixt the convolutions. There was considerable gelatinous effusion about the optic nerves, and about one ounce of colourless fluid in the ventricles. The substance of the brain throughout was unusually vascular.

#### XI.—*Deposition on the surface, combined with suppuration in the Ventricles.*

CASE 15.—A child, aged 5 months, previously in perfect health, was seized with convulsion on the evening of 21st November 1817. The attack, which was not of long duration, was ascribed to dentition; the gums were divided over several teeth that appeared to be producing irritation, and the other remedies were recommended that are usual in such affections. He continued well through the night. On the 22d, was oppressed with quick breathing, and in the afternoon, without any return of convulsion, he fell into a comatose state. This continued several hours, and then subsided; after bleeding with leeches on the temples, brisk purging, and the use of cold applications to the head. On the 23d he was much relieved; eye clear; took notice of objects, and was disposed to play: had no complaint, but occasional starting. On the 24th, continued through the day in the same favourable state. Late at night he was seized with convulsion, which continued to recur at short intervals, through the whole night, and he died early in the morning.

*Dissection.*—On the surface of the brain, between the pia mater and the arachnoid membrane, there was an extensive layer of a firm adventitious membrane of a yellow colour, similar to that which has been described in the two preceding cases. It covered a great part of the upper surface of the brain, and there was a considerable quantity of it on the inferior surface of the anterior lobes, between the hemispheres, and on the cerebellum. In the lateral ventricles, there was nearly an ounce of purulent matter, and the substance of the brain surrounding the ventricles was very soft. There was no serous effusion. There was much gelatinous effusion.

about the optic nerves, under the base of the brain, and under the cerebellum. Under the medulla oblongata there was gelatinous effusion, mixed with some purulent matter.

### XII.—*Suppuration on the surface of the Brain.*

CASE 16.—A child, aged eight months, died 13th March 1818, of an illness which had continued rather more than three weeks. It began with fever, restlessness, and quick breathing; afterwards, there were frequent slight convulsive affections, with much oppression, and at last severe convulsions, squinting, and coma. At an early period of the complaint, there was observed a remarkable fulness or prominence of the anterior fontanelle; towards the end of the second week, this increased considerably; in the third week it was elevated into a distinct circumscribed tumour, like the half of a large gooseberry. This tumour was on the middle of the fontanelle, and was soft and fluctuating; pressure upon it occasioned convulsion. It was opened by a small puncture, and discharged at first some purulent matter, afterwards bloody serum. No alteration took place in the symptoms, and the child died four days after.

*Dissection.*—The opening which had been made through the fontanelle was found to lead to a superficial deposition of thick flocculent yellow matter mixed with pus, under the dura mater, and covering the surface of the brain to a considerable extent. There was also a deposition of similar matter under the arachnoid coat, and between the convolutions, about the optic nerves, and under the medulla oblongata. There was a good deal of fluid in the ventricles.

### XIII.—*Suppuration within the left Lateral Sinus.*

CASE 17.—Miss S. aged 16, (3d August 1816,) complained of severe headach, which extended over the whole head; had an oppressed look, and great heaviness of the eyes; pulse 120; tongue clean and moist; face rather pale. She had been liable to suppuration of the ears; and the left ear had been discharging matter for three weeks; had complained of headach for a fortnight; confined to bed two days.

General bleeding, purging, and blistering were employed on the 3d and 4th with considerable temporary relief.

5th.—Headach easier ; some vomiting, and several severe attacks of shivering ; pulse 112.

6th.—Pulse 84 ; headach severe ; now confined to the back part of the head ; eye heavy ; pupils a little dilated ; bleeding from the temporal artery was employed, purging, an issue in the neck, &c.

7th.—Pulse in the morning 84, in the evening 120 ; headach as before ; a dull vacant look ; bowels very open ; a buffy coat on the blood from the temporal artery.

8th, 9th.—Pulse rising, from 120 to 148. Severe pain of the back of the head and neck.

10th, 11th.—Pulse from 130 to 140 ; strength failing ; a tendency to stupor, and occasional delirium ; but was sensible when fully roused, and said she felt that she was at times delirious ; constant complaint of pain in the back of the head.

12th.—More comatose, but sensible when roused ; spoke sensibly, and knew those about her a few minutes before her death, which happened about mid-day.

*Dissection.*—The pia mater was highly vascular, as if minutely injected ; in some places, especially on the posterior part, it was distinctly inflamed ; the veins were very turgid, and at one place, on the posterior part, there was a slight appearance of extravasated blood under the pia mater ; there was no serous effusion, and no disease in the substance of the brain ; the left lateral sinus was remarkably diseased through its whole extent. When compressed it discharged purulent matter, and some thick cheesy matter ; it contained no blood ; its coats were much thickened, and its inner surface was dark coloured, irregular and fungous. At one place the cavity was nearly obliterated. The disease extended into the Torcular Herophili, and affected a little the termination of the longitudinal sinus. Behind the auditory portion of the temporal bone, near the foramen lacerum, and in the course of the left lateral sinus, a portion of the bone, nearly the size of a shilling, was dark coloured and carious on the inner table. It was at this place that the sinus appeared to be most diseased. The auditory portion of the bone was extensively carious ; the cells of it were every where full of purulent matter, and communicated freely with the cavity of the ear.

#### XIV.—*Suppuration of the Brain, with remarkable disease of the Bones of the Cranium.*

CASE 18.—A woman, aged 48, about a year before her death, fell down a stair, and received various injuries, espe-

cially one on the head, which confined her to bed for some days. From this time her health was bad. She generally complained of fixed pain of the head, and various disorders of the stomach and bowels. She, however, went about her usual employments till about three weeks before her death, when she was suddenly attacked with fever, and outrageous delirium. After a bleeding from the arm these symptoms subsided; next day she had extensive erysipelas of the face, which went off in a few days. She was then able to be out of bed, but complained of a fixed and deep-seated pain in the right side of the head, a little above the ear, and there was a discharge of matter from the right ear. She continued in this state, sitting up part of the day, till three days before her death, when she became comatose, with partial paralysis of the left side, and frequent convulsive agitation of the right arm. She died on the third day after the occurrence of these symptoms.

*Dissection.*—The cranium was very easily opened, the bones being remarkably soft. On raising the skull-cap, the inner surface of the whole upper part of the cranium exhibited a singular state of disease. The smooth surface of the inner table was wanting through its whole extent, and there appeared the rough, irregular, cancellated structure of the central part of the bone. Betwixt this surface and the dura mater, there was a soft adventitious membrane of a yellowish colour, varying from 1-12th to 1-8th of an inch in thickness. In raising the skull-cap, this membrane in some places adhered to the dura mater, leaving exposed the rough irregular surface of the bone, in other places it adhered to the bone, exposing the dura mater of its natural appearance. The parts affected by this disease were, the frontal bone above the orbital plate, the whole of both parietal bones, the squamous portions of both temporal bones, and rather more than the upper half of the occipital bone.

The greatest erosion was on the parietal bones, where some portions were transparent, and at a few points eroded quite through. The external surface of the cranium was of a natural appearance, except at a few points where it was perforated by the erosion. In the lower part of the right hemisphere of the brain, towards the posterior part, there was an extensive abscess. The brain in other respects was healthy. On the petrous portion of the right temporal bone, the dura mater was of a dark colour, and detached from the bone, but the bone was not carious.

**XV.—Abscess of the Medulla Oblongata.**

CASE 19.—A child, aged 16 months, whom I saw only a week before his death, had been in a declining state for ten months. The beginning of his bad health was ascribed to a fall, in which he was supposed to have sustained an injury of the back of the head or neck. I could obtain no very distinct account of his illness. He was reported to have been often much oppressed, and gradually wasting. Three months before I saw him he had squinting, and appeared to lose the use of the right arm and leg. The squinting went off after some time, and afterwards recurred occasionally. The use of the arm and leg appeared never to have been entirely recovered; they always appeared much weaker than those of the other side, and he seldom attempted to raise the arm at all. He had also occasionally suffered slight convulsive affections. When I saw him, there was no marked symptom, except considerable emaciation; the pulse was frequent; the bowels were costive. Much dark-coloured matter being evacuated from his bowels, he seemed to be relieved. After some days I took notice of a remarkable slowness of the pulse, without any other symptom. In the course of that day, he was attacked with violent convulsion. This recurred several times during two days, and then proved fatal. There was no coma; the eyes continued sensible except during the convulsions, and he took notice of objects a very short time before his death.

*Dissection.*—There were several ounces of fluid in the ventricles of the brain, and considerable gelatinous effusion about the optic nerves. In the substance of the medulla oblongata, where it is crossed by the pons Varolii, there was an abscess which appeared to occupy the whole diameter of it. It had the appearance of a scrofulous abscess, and was contained in a sac, the inner surface of which was of a yellow colour and ulcerated. There was considerable disease in the glands of the mesentery.

**XVI.—Remarkable thickening of the dura mater.**

CASE 20.—Mr. M. aged about 60, for about two years before his death, had been liable to attacks of giddiness, with loss of muscular power, in which, if not prevented, he would have fallen down. In these attacks he did not lose his recollection, and he recovered completely in a few minutes. Before the commencement of this complaint, he had been liable to severe headache, with some giddiness, the attacks of which

generally went off with spontaneous vomiting. He was entire in his mind, but considerably fallen off in flesh and strength ; he felt an unsteadiness in walking which made him afraid of walking alone ; and for several months before his death, had perceived an increasing weakness in both lower extremities. On the first of August 1816, he was attacked with hemiplegia of the left side, accompanied by headache and giddiness. His pulse was natural, and his mind was not affected. For four days he continued to be affected with the most complete hemiplegia ; he then began to recover a little motion of the parts ; and about the 15th, was able to raise his arm to his head, and to walk a little with assistance ; he still complained of giddiness and noise in his ears ; but had little headache ; bleeding and purgatives had been employed, with spare diet. On the 19th there was considerable headache. On the 20th he was incoherent ; and on the 21st in perfect coma, with some convulsion. On the 22d, he was considerably recovered, so as to know those about him, and answer questions rationally ; but at night relapsed into coma, and died on the 23d. For the last three days his pulse had been from 112 to 120.

*Dissection.*—Along the upper part of the right hemisphere of the brain, there lay a remarkable tumour 5 1-2 inches long, 2 1-2 broad at the broadest part, and about half an inch in thickness. It was formed by a separation of the laminæ of the dura mater, and a deposition of new matter betwixt them. This new matter was, at the posterior part, white and firm. In other places, chiefly about the centre of the tumour, it was more recent coagulable lymph, firm, yellow, and semi-transparent ; at the anterior part there was a cavity containing a yellowish serous fluid. This tumour lay from before backwards, along the right hemisphere ; its inner edge was about an inch from the superior longitudinal sinus. The dura mater in the neighbourhood of the tumour all round, was considerably thickened, as were also the coats of the longitudinal sinus. The surface of the brain, where the tumour lay, was depressed by it so as to retain the impression of its figure ; and on the anterior part, the substance of the brain was to a considerable depth soft, and broken down, with some appearance of suppuration. There was very little serous effusion, and no disease in any other part of the brain.

### SECT. III.—GENERAL OBSERVATIONS.

THE painful detail of fatal cases which I have described in the preceding section, may be considered as illustrating the

principal forms and terminations of chronic inflammation of the brain. Much remains to be done before we can obtain a complete acquaintance with this dangerous disease; but there are several principles, both pathological and practical, which appear to be legitimate conclusions from the cases that have been described. They may be referred to the following heads:—

### I.—*Varieties of Hydrocephalus.*

Of the cases which terminate by serous effusion, there appear to be two leading varieties, which differ remarkably from each other. In the one, the symptoms are at first slight, and excite no alarm; and it is only at an advanced period of the complaint, when it begins to pass into coma, that it assumes the character of a dangerous affection of the brain, (cases 2d and 3d.) In the other, the symptoms are from the first acute and violent, indicating an inflammatory action of the most dangerous kind, (cases 5th and 6th.) Betwixt these two forms of the disease, a remarkable difference occurs in the morbid appearances. In the former, there was serous effusion, without disease in the substance of the brain; in the latter, the effusion was combined with that peculiar destruction of the central parts of the brain, which I have given my reasons for considering as the effect of inflammation of these parts. In case 4th, this destruction of the central parts was the only morbid appearance, though the disease exhibited all the ordinary symptoms of hydrocephalus. Since I first began to pay attention to this appearance, I have generally found the serous effusion combined with it in those cases in which the symptoms were acute, and uncombined with it in those in which the symptoms were at first slight, and the progress slow and insidious, exciting little alarm till they began to shew a tendency to coma. Have we not, then, reason to believe, that, in these acute cases, the original disease is a deep-seated inflammation of the brain?—that this inflammation may give rise to serous effusion, or that it may run its course to a fatal termination without effusion? In our pathology of these affections, do we not attach too much importance to the effusion, ascribing to it symptoms which we have reason to believe may exist without it, and directing much of our practice to promoting its absorption, while, even if we could rely upon this effect being produced, the original and fatal disease would remain unchanged? These remarks I merely offer, at present, as hints for farther observation. The subject is too important to

admit of any general conclusions from the experience of an individual.

The other form of the disease, in which there are no symptoms of an acute or inflammatory nature, and in which the first indication of danger is from the appearance of coma, appears to differ materially from the acute form which I have just alluded to. The cause of the effusion in these cases is very obscure, and perhaps it has been too little the subject of investigation. On opening the cranium, and finding the ventricles of the brain distended with serum, we are too apt to conclude the examination, and to consider the disease as accounted for. We are not thus satisfied in other parts of the body. On finding effusion in the thorax or abdomen, we do not consider it as a primary disease, but proceed to investigate its origin, and we are generally able to trace it to an affection of some of the viscera, as the liver, the lungs, or the heart. We have as little reason for considering it as a primary disease in the brain, though we have not been so successful in tracing its origin. There is, besides, considerable ground for doubting whether the mere effusion be the cause of the symptoms which usually accompany it. Morgagni mentions a man who had an attack of hemiplegia, and completely recovered from it: after two years he died suddenly, from suffocation, in the advanced stage of pneumonia, having never, since his former illness, shewn any symptom in the head, except occasional headache. On dissection eight ounces of fluid were found in the ventricles of the brain. Dr. Heberden describes the case of a man, in whom he found, on dissection, about eight ounces of fluid in the ventricles, besides a considerable quantity under the arachnoid coat. He died suddenly, after being weakened by a febrile attack, but without any symptom that indicated disease in the brain.\* From such cases as these, many of which are on record, may we not conjecture, that effusion in the brain does not necessarily produce urgent symptoms, and that the coma and other symptoms which attend the ordinary cases of hydrocephalus, are the result of the morbid condition of the brain, which produces the effusion, and not the immediate effect of the effusion itself? This morbid condition, we have reason to believe, is in one form of the disease chronic inflammation, and we have accordingly seen it accompanied by coma, and the other usual symptoms of hydrocephalus, without having induced effusion. What is the nature of it in the other cases which have not an

\* Medical Transactions of the College of Physicians of London, Vol. V.

inflammatory character, is involved in much obscurity. Among the most common causes of serous effusion, in other parts of the body, are circumstances that impede the transmission of the venous blood. In this manner ascites is produced by induration of the liver, and general dropsy by diseases of the lungs and of the heart. In the ventricles of the brain, there is much reason to believe that the effusion takes place from the vessels of the choroid plexus. We see the cellular texture of this substance elevated by it into vesicles resembling hydatids; and in a case by Mr. Howship, in which the effusion had a highly inflammatory character, he found the choroid plexus covered with flocculi of coagulable lymph, giving considerable reason to believe, that it had been the source of the effusion. Now, the blood returning from the choroid plexus, as well as from the lining of the ventricles, passes into the straight sinus by the vena Galeni; and this large vessel is, perhaps, more exposed to compression than any of the other veins of the brain; the branches which form it unite in the velum interpositum, which lies under the fornix, and the trunk of the vein is found passing backwards betwixt the corpora quadrigemina and the posterior part of the corpus callosum. We cannot doubt that these parts are liable to diseases both acute and chronic; but the nature of them has not been sufficiently investigated, nor the effect that they would be likely to produce on the circulation of the vena Galeni. I think, however, we may conclude, upon the most fair and sound analogy, that any considerable interruption to the circulation in that vein, would give rise to effusion in the ventricles. Perhaps there are other causes which may operate in the same manner, such as disease of the sinuses, producing diminution of their area. On these important points much remains to be done by accurate observation.

[To be continued.]

# REVIEW.

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*A physiological System of Nosology; with a corrected and simplified Nomenclature.* By JOHN MASON GOOD, F. R. S. Mem. Am. Phil. Soc. and F. L. S. of Philadelphia. London, 1817. pp. 566.

[From the Edinburgh Medical and Surgical Journal.]

THIS is one of those volumes which do honour, not merely to the author, but to the profession. We readily, indeed, confess that its erudition goes beyond our depth, an unusual confession for professed critics; but still we pretend to so much knowledge, as to deliver our opinion with great confidence, on the admirable application of profound and extensive literary attainments by Mr. Good, to the rational reformation of the nomenclature of nosology. If we were less confident of the correctness of our opinion, we would be warranted to express it upon the authority of the *plus docti* of the profession, of the Fellows of the Royal College of Physicians of London, whom we applaud for taking the very unusual step of granting that the volume should be dedicated to them, and that not in consequence of private patronage, or general esteem, but after perusal of the work itself. Their liberality in thus fostering a learned production of a member of the profession, not entitled to be ranked higher than among those whom, by their charter and bye-laws, they are bound to consider as *minus docti*, almost makes us hope that the time is approaching when the fictitious is to become the real distinction between the two divisions of their body. At any rate, we trust that they will never have to repent the want of that selfish prudence which would have made them refuse a well-deserved patronage, lest it should form a troublesome precedent.

"The following work was announced to the public, and would have appeared at the beginning of the year, but that the author was desirous of obtaining the sanction of the Royal College of Physicians to dedicate it to that learned body.

To the gratification of this desire, the President with his accustomed politeness, afforded every facility, consistently with a due deference to the individual judgment of the fellows of the college. A copy of the work was laid for public inspection upon the censors' table on February 3; an official notice of the same communicated; and three other copies circulated among the fellows in rotation, and in as many different directions, for an examination of it at their respective homes. The court assembled on March 31, when the question was taken into consideration, and the author's request unanimously acceded to."

It would far exceed the limits we can allot to this work, to enter into a satisfactory review of its contents. Almost every page of the preliminary dissertation furnishes matter for discussion; and although, in general, the opinions advanced in it seem to us correct, there are some which we are disposed to controvert. To select these topics would be inviolous;—to comment upon the others would be to repeat what is better said by the author.

The outline of this work, we are told, was sketched as early as the year 1808; since which time the author has kept his object steadily in view.

"The main object of the present attempt is not so much to interfere with any existing system of nosology, as to fill up a niche that still seems unoccupied in the great gallery of physiological study. It is that, if it could be accomplished, of connecting the science of diseases more closely with the sister branches of natural knowledge; of giving it a more assimilated and family character; a more obvious and intelligible classification; an arrangement more simple in its principle, but more comprehensive in its compass; of correcting its nomenclature, where correction is called for, and can be accomplished without coercion; of following its distinctive terms as well upwards to their original sources, as downwards to their synonyms in the chief languages of the present day; and thus, not merely of producing a manual for the student, or a text-book for the lecturer, but a book that may stand on the same shelf with, and form a sort of appendix to, our most popular systems of natural history; and may at the same time be perused by the classical scholar without disgust at that barbarous jargon, with which the language of medicine is so perpetually tesselated; and which every one has complained of for ages, though no one has hitherto endeavoured to remedy it.

"The present, however, is but an attempt towards what is wanted, and is only offered in this view. How far such an attempt may be worth encouraging, and by what means it may be conducted towards a desirable degree of perfection, may perhaps be best determined by a brief glance at the chief nosological systems of the day, the nomenclature in actual use, and the general nature of the improvement proposed in the ensuing volume. It is the aim of this introduction to offer a few hints upon each of these subjects." P. i, ii.

Accordingly, in the first section Mr. Good gives a succinct, but accurate and critical history of nosology; and in the second he sufficiently exposes the barbarous jargon of its nomenclature. In the third section, he treats of the scope of his present work, which is chiefly intended to improve nosological arrangement and nomenclature. Of his first attempt towards the latter, we have spoken in a preceding volume, (Vol. VIII. p. 208.) On the present occasion, he has considerably modified his principles, and has somewhat reconciled us to his neoterick nomenclature. His general rules are:

"Firstly, a strict adherence to Greek and Latin terms alone. Secondly, a use of as few technical terms as possible, and consequently a forbearance from all synonyms. Thirdly, a simplification of terms, as far as it can be done without violence or affectation, both in their radical structure and composition. Fourthly, an individuality and precision of sense in their respective use." P. li, lii.

The second part of our author's design is to improve the arrangement of diseases, and he has endeavoured to erect his system on a physiological basis. He resolved

"to take at once the animal frame in its mature and perfect state, and trace it, from some well-defined and prominent function, through all the rest; which, like links in a circular chain, may be said to issue from it, and to be dependent on its existence and properties."

"The author was soon led to a preference of the second scheme. It is by far the simpler of the two, and directly harmonizes with the fundamental principle, which runs through all the systems of zoology, botany, and mineralogy, of forming the arrangement and selecting the characters from the most perfect individuals as specimens. He decided, therefore, upon taking the more prominent functions of the human frame for his primary or classific division, and the more important of their respective organs for his secondary or ordinal; and without tying himself to a particular

distribution of the former in any authorized or popular use at the present moment, to follow what appears to be the order of nature in her simplest and most intelligible march." P. lxxviii, lxxix.

We should now give our opinion upon the merits of this arrangement. They are unquestionably great; but we are not prepared to enter into a critical examination of a subject of so extensive and intricate a nature. Whether it is likely to supersede the nosology of Cullen, can only be determined by frequent comparison with observation and protracted study; but we are decidedly of opinion that it deserves to be referred to along with it; and at all times it is of advantage to possess arrangements of diseases, upon all the various rational principles upon which a nosology can be established, because, by means of one of them, we shall sometimes be able to identify a disease which the others would leave ambiguous.

Mr. Good, with the view of rendering his work more useful, and to assimilate it more closely to works of the same kind in the collateral branches of natural knowledge, has, to the systematic name of every disease, subjoined its chief synonyms in the English, French, and German, among the vernacular tongues, and in the Greek, Latin, and Arabic, as technical synonyms.

Lastly, In order to afford relief to the dryness of technical definitions and verbal criticism, Mr. Good has digested the notes on his system into a running commentary, which he has endeavoured to render replete with interesting cases, valuable hints or remarks, and singular physiological facts, gleaned from a pretty extensive perusal of the most approved authorities, collective or individual, ancient or modern; occasionally interwoven with similar illustrations, as they have occurred to the writer in his own private walk and intercourse of life.

We might now give an outline of our author's arrangement, but unless we were to insert all his species it would be of no use, and our space will not allow us to extend this article any farther.

*An Account of some Experiments made with the Vapour of Boiling Tar, in the Cure of Pulmonary Consumption.*  
By ALEXANDER CRICHTON, M.D. F.R.S. Physician in Ordinary to their Imperial Majesties the Emperor, and Dowager-Empress of Russia, &c. &c. Edinburgh, 1817.  
pp. 62.

[From the Edinburgh Medical and Surgical Journal.]

WE cannot review this pamphlet. It relates to matters of fact, of which we have no experience. We are extremely sceptical of the possibility of curing pulmonary consumption, and we are well read in the history of supposed remedies, which have from time to time gained the confidence of the public, only to fall successively into oblivion. Every proposal of a new remedy made in this country we receive with distrust. We see so much of the undeserved success of interested empiricism, that the *auri sacra fames* immediately occurs to us as the real object, when we hear of any person pretending to cure consumption.

Of that unhallowed motive, our present author must stand unsuspected. Not only our personal acquaintance with him, and the high rank which his talents and exertions have deservedly procured for him, render it improbable ; but his situation in the Russian service, precludes almost the possibility of his discovery, even if it should prove as beneficial as his most sanguine hopes could anticipate, procuring to him any other reward than the satisfaction of having been the means of alleviating a great deal of human suffering.

Sir. A Crichton took the hint of employing tar fumigation in consumption, from a passage in the work of Mr. Mudge, giving an account of an imperfect trial. He had recourse to it in two cases in his private practice, and the patients recovered. The only doubts are, whether they really laboured under phthisis, and whether they owed their recovery to the tar fumes. That our readers may judge for themselves, we quote the second case :

"Mrs. Fitch, thirty years of age, thin, of a livid complexion, rather flat chested, caught a violent cold during the summer of 1815, being then with child for the third time. She had recourse merely to common domestic remedies, and the cough continued throughout her pregnancy ; as it was not of a painful or intense nature, it gave her no alarm. She was brought to bed in November of a healthy child ; but she says

it caught her disorder, and died quite exhausted. Mrs. Fitch continued to cough during the whole winter, but the spring seemed to revive her, and to diminish her cough considerably. Some time afterwards, however, the cough became more violent than ever, and assumed a very alarming character. She then came to consult me about the middle of July 1816. She appeared to me in the highest degree consumptive: already a marasmus had commenced; the cough left her no rest by night or by day; she had a copious expectoration of greenish-yellow matter, of the consistence and other apparent qualities of pus. Colliquative sweats, accompanied by diarrhoea, had reduced her to a skeleton; her pulse was always quick; a high hectic fever came on daily about 12 o'clock, which ended in a copious colliquative sweat at night.

"Believing her case incurable, but wishing to ease her, I prescribed a decoction of althaea, with a little tincture of opium, to be taken every two hours; and as her state of extreme debility prevented her from being taken to the cable manufactory, I ordered her room to be fumigated with tar vapour; but I had scarcely any hope of her recovery.

"At first, the vapour occasioned headach as in the former case; but as she felt considerable relief in her chest, she persisted in the trial of this remedy. She assured me, that, without using any other means of cure than those above stated, she found, at the expiration of a week, that her cough and expectoration were much diminished, but that her great weakness prevented her quitting her bed. Her perspiration was also much lessened; the diarrhoea had ceased since her use of the decoction of althaea with opium.

"Her appetite and strength soon returned, while her cough and expectoration became daily less and less. At length she rose from her bed, and sat up several hours in an armed chair. From this period, her convalescence went on rapidly; all the bad symptoms disappeared, and she regained flesh. Her cough totally left her by the time of my returning into town early in September. In a week afterwards, I heard that she had resumed her former occupations, and felt herself perfectly recovered.

"From this time, until the 11th January 1817, I had heard nothing of her. She then came to tell me, that she had continued quite well the four last months of the year; that since September she had neither taken medicine, nor employed the tar fumigation, but that she now thought she had again caught cold from the dampness of her habitation; that for the last fortnight her former cough and expectoration had returned,

and that she already felt much weakened. I prescribed exactly the same treatment as before ; and in a month afterwards, I heard with infinite satisfaction, from her husband, that she was again recovered." P. 15—18.

These experiments were continued in the hospitals, and the reports of the cases are faithfully detailed. We quote the following note from one of the reports, because the bad effects of *burning* instead of *volatilizing* the tar, by using a cracked vessel, were very obvious this very day, in trials under our immediate inspection. The vapours gave great relief, the burnt fumes cause much harm.

" About the end of February, we discovered that the tar fumigation had been ill conducted. In the first place, a bad kind of tar had been employed ; and in the second, that it had been boiled in a cracked vessel ; by which means the tar, instead of being volatilized, was burnt and decomposed by coming in contact with the iron heater, which produced very bad effects on the patients,—they coughed more, and complained of oppression on the chest.

" This improper mode of fumigation being corrected, and having employed, according to your Excellency's order, the pix liquida only, such as is employed in the cordage of ships, with the addition of half an ounce of \*sub-carbonate of potash to each pound of tar, our patients are going on as well as they did at first." P. 37, 38.

We conclude by quoting Sir Alexander's general observations.

" The patients who have derived the greatest benefit from the tar vapour, are those who were attacked with true scrophulous, or tubercular phthisis. I confess this is quite contrary to what I expected. This kind of phthisis is the most common in Russia, as in all northern climates.

" The tar vapour seems to have healed the ulcers, and removed the inflammation of the tubercles in the greater number of such cases, but I do not believe it produces the absorption of the tubercles themselves. My first patient, N., although well enough to attend to his business out of doors, and although he has regained his strength, has still some symptoms, which, to the eye of an observing physician, announce the presence of these tumours in his lungs, but so long as they remain inactive, that is to say, without inflammation or ulceration,

\* I ordered the sub-carbonate of potash to be added, in order to destroy the pyro-ligneous acid, which is generally found mixed with the tar, and which excites coughing.

tion, life may be prolonged; and if circumstances allowed this patient to reside in a better climate, there is every probability that he might live long.

"In cases of phthisis derived from a large abscess or vomica, particularly in young persons of sanguineous constitutions, where suppuration goes on rapidly, and is generally accompanied by fever, the tar vapour does little good. The immense quantity of purulent matter constantly present in the cavities of these large abscesses, prevents the vapour from acting upon their surface, and consequently it loses its effect. In two cases of this kind, a very temporary relief only took place from the fumigation. Indeed, it must be in vain to expect any great success from this, or from any other remedy, in cases of violent and neglected inflammation of the lungs, terminating in large abscesses, the disorganization of the lungs in these cases being too widely extended to admit of cure.

"Nearly the same thing may be said of cases of suppuration succeeding active hæmorrhages in young persons, especially when accompanied with fever.

"In one case, however, of this kind, I succeeded in removing the consumptive symptoms by the tar fumigation, and the use of acetate of lead, combined with the aquaeous extract of opium, which the patient continued to take during a whole month, without experiencing cholic, or any other inconvenience.

"At that period, when the cough, expectoration, and hectic fever, are greatly subdued by the influence of the tar fumigation, it seems to me often injudicious to continue it longer, or at least in so strong a degree as before; it then appears to dry the lungs too much, and ends in exciting a spasmodic kind of cough. The patient also, when in a state to breathe the common air, becomes weakened by the want of it. In a remarkable case of tubercular phthisis, where the tar vapour had produced extraordinary benefit, I was obliged to suspend, every now and then, the use of it particularly when the expectoration was very slight. During these suspensions, however, which never exceeded two or three days, I always found the expectoration, and other bad symptoms, increase."

# INTELLIGENCE.

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## Foreign.

THE following operation is of so singular a nature, and the remarks upon it of so particular a kind, that we shall present them in detail to our readers without any abridgment. The account is given by M. Richerand, in a memoir read at the Royal Academy of Sciences of the French Institute.

" I have (says the author of the paper,) the honour to present to the society an account of a surgical operation unparalleled in the annals of our art ; an operation entirely novel, commanded, however, by necessity, and which has been justified by success.

" M. Michelleau, an officer of health, at Nemours, was afflicted for three years with a cancerous tumour upon the region of the heart, which was extirpated by a neighbouring surgeon, in the month of January. Upon the removal of the first dressings, a bloody fungus excrescence showed itself in the centre of the wound ; which, notwithstanding that it was cauterized daily, still continued to increase with rapidity. In consequence, a second operation was tried, and the surgeon penetrated still deeper. Indeed, after having laid bare the ribs, the instrument was made to penetrate to the pleura. New funguses, however, still presented themselves, in spite of the repetition of the caustics ; and the patient, wearied with so many ineffectual attempts at radical relief, came to Paris about the end of March, determined to subject himself to any expedient which might afford the most distant prospect of being freed from his dreadful malady, or give him the smallest hope of otherwise inevitable death.

" At this time an enormous fungus rose from the wound, from which brown and soft tumour, a sanguous discharge issued, which was so foetid, that it was impossible to remain near the patient for a quarter of an hour without changing the air of the apartment. But the pains were not now so great as formerly ;

neither were there colliquative sweats, nor diarrhoea; and although the patient was tormented by a protracted cough, he retained a robust appearance, and preserved a happy temperament of mind: his age was forty.

"Under these circumstances, the taking away of part of the ribs was determined upon, (*la résection des côtes,*) where it was conceived the cancer must have originated. This undertaking having devolved to me, I forewarned the patient that it was most probable I should be obliged even to cut away a portion of the pleura; he, however, submitted without hesitation to the experiment, all the possibilities of which he was well able to appreciate.

"Every thing being thus arranged, I proceeded to the operation on the 31st of March, encouraged in this formidable enterprize by the friendly and active assistance of my colleague, Professor Dupuytren, as well as by others; the patient himself presenting me the instrument, and refusing to be held or assisted by others, and promising a display of firmness which was fully realized.

"I began by enlarging the wound, with a crucial incision; and I thus laid bare the sixth rib, which appeared irregularly enlarged, (*gonflée et rugueuse,*) about four inches in length. With a sheathed bistoury, the point of which I carried along both the upper and under margin of the rib, I divided the intercostal muscles, then with an extremely small saw I divided the rib at each end of its diseased part; I then detached this isolated portion of rib from the pleura, with a common spatula, which I found a business of unexpected facility, and which facility arose from the thickening of the pleura under the bone, as was proved by the event of the operation.

"The seventh rib was laid bare in the same manner, and to the same extent; but with much more difficulty, and not without a slight tearing. The pleura proved now to be considerably diseased, being thickened, and of a fungous prominence in the space occasioned by the removal of the two portions of ribs. The cancerous state of the part appeared so to extend itself above the sixth rib, that about eight square inches of the membrane seemed to be affected. What was to be done under these circumstances? Not to cut away the diseased portion of pleura, would be to leave incomplete an operation which, from its commencement hitherto, (during the space of about twenty minutes,) had promised the most favourable results. Each of my assistants was furnished with means for arresting the fearful haemorrhage, which was to be

expected at the moment that the intercostal arteries should be divided. I now cut away the diseased part of the pleura with scissars, with bent blades; and whether it were that this instrument rather presses than cuts, and tears the membranes which it divides, or whether it were on account of the retraction and lessened calibre of the vessels, occasioned by the previous cauterizations, not a drop of blood followed the incision: but at this moment the external air rushed in with violence, compressing the left lung, which, with the heart, enveloped by its pericardium, presented itself at the mouth of the wound. In order to moderate this rush of external air, and prevent the menaced suffocation consequent upon it, I clapped my left hand upon the wound, while, with my right, I hastened to apply a large compress upon it, spread over with cerate. The entrance of the air was thus obviated by this compress, which was sufficiently large not only to cover the wounded surface, but the whole side of the chest: over it I placed a large and thick pledget of lint: I put some other compresses above this, and secured the whole with a rolling bandage, applied moderately tight.

"For twelve hours after the operation the anxiety and difficult breathing were extreme. The patient passed a whole of the night in a sitting position. Towards the morning, sinapisms applied to the soles of the feet, and to the inside of the thighs, occasioned the respiration to be a little less difficult; and from this moment the pulse arose, and the vital powers seemed to be regenerated. An infusion of linden and violet flowers, (*fleurs de tilleuls et de violettes*,) impregnated with some drops of distilled orange flower, and sweetened with gum-arabic syrup, constituted the whole of his aliment; and thus passed three days with moderate fever and restlessness. It was ninety-six hours after the operation that the first dressing was removed; and it was now perceived that the pericardium and the lungs had formed an adherence with the whole contour of the four sided opening, forming a kind of window to the heart; but this adhesion was fortunately not complete; and from the sixth to the twelfth day, in consequence of this incomplete adherence, there was a copious discharge of serous matter, which ran down the breast every time that the dressings were removed. In the space of twenty-four hours about half a pint of this matter was discharged. On the thirteenth day, this serosity had produced an inflammation on the surfaces; it now ceased to flow: and on the eighteenth day, the adhesion between the lungs and pericardium was complete. From this time the air ceased to

find an entrance by the wound; the patient could lie on his side, and sleep and appetite were restored to their wonted integrity.

"The wound now contracted rapidly, and put on the most favourable appearance: on the one-and-twentieth day the cerate application was discontinued; and the wound was treated henceforth as of the most common and simple kind.

"The subject of the operation, who had already for several days made trial of his strength in the garden contiguous to his lodging, could not now resist his desire to go in a carriage through the streets of Paris. In this excursion he occupied six hours, during which time he visited l'Ecole de Médecine, and witnessed the lodgement of the extricated portion of his ribs in the cabinet of that institution; not finding himself fatigued by this day's work, nothing could dissuade him from setting off from the capital on the twenty-seventh day from the operation, and of returning home, where he is now arrived; furnished with a piece of boiled leather, (*d'une plaque de cuir bouilli,*) in order to cover the cicatrix when that shall be completely formed.

"I did not fail to embrace the opportunity which the above extraordinary occurrence presented, of verifying the doctrine of the perfect insensibility of the heart and the pericardium; the individual in question was not at all sensible of a gentle application of the fingers to these organs. I may also add, that during life the pericardium in man is so transparent, that the heart may be perceived through it as if it was inclosed in a glass case: so much so, indeed, that we had thought it was the bare organ which we saw without any envelope. It is known that this is by no means the case after death; and in this point of view the pericardium may be compared to the membrane enveloping the eyes, which becomes thickened and opaque, and preventive of vision as death approaches.

"It is ascertained, too, that a large opening, even with loss of substance, made into the parieties of the thorax, is not necessarily followed by suffocation, effusion of blood, or fatal inflammation of organs into which the exterior air is thus permitted to penetrate; it appears, therefore, that in diseases of which, without an external opening, the individual must necessarily fall a victim—in a dropsy of the pericardium, for example, one might make an opening opposite the heart, which would not only permit the evacuation of the water in which this organ is plunged, but might prove a radical cure of the malady, if we could bring on an adhesive inflammation of sur-

faces in the same manner as is effected in the cure of hydrocele.\* A similar operation would likewise seem to be indicated in order to lay open a lung that was partially affected, and to detach the diseased from the sound part, by ligatures. Such attempts will by some be condemned as hazardous enterprizes; but how many operations are there, now successfully performed, which but half a century since were considered impossibilities?

"I will not, Gentlemen, (M. Richerand concludes) occupy any more of your time in reflections upon the above case; it is for those of my auditors who are particularly interested in the advancement of surgery to determine, whether I am too enthusiastic in my anticipations; and to judge whether the operation I have above described, is at all likely to contribute towards the progress of our science, or to the diminution of the ills by which mankind is surrounded."—*Lond. Med. Repository.*

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*On the Absorbent Power of the Veins.* By M. MAYER.

From the *Journal de Médecine.*

"DR. MAYER, Professor of Anatomy at Berne, has just published the results of a great number of experiments; by which he claims to be the first individual to have established the fact, that the veins are endowed with an absorbing power. We think it, however, due to the merits of one of our coadjutors, M. Majendie, to maintain, that he has been before hand with Mayer, not indeed in suggesting the doctrine in question, for that is older than either of the above physiologists, but in incontestably proving the truth of such doctrine. In a Memoir of the Institute, read in 1809, and published in the *Bibliothèque Medicale* of the same year; also, in the second volume of the *Précis Elémentaire de Physiologie*, will be found many experiments bearing upon this point: and if Dr. Mayer will take the trouble of turning to this last work, he will perceive, that not only is the absorbing faculty of the veins there proved to demonstration, but that the same faculty, as appertaining to the lymphatic vessels, is rendered very doubtful. He will there observe also, that the major part of

"M. Richerand begs that the Members of the Profession would send any Case that offers of hydrops pericardii, provided that the individual be not too enfeebled by age, or by the protraction of the malady; unless they would rather choose to undertake the proposed operation themselves."

his own experiments had been made with similar results by Majendie. But, although Mayer has been thus anticipated, the inferences which he draws from his several experiments, are certainly deserving commendation, and we shall not consider it a loss of time to pursue this interesting research.

M. Mayer has only given to the world the result of his experiments, which, in our opinion, is a less satisfactory manner of publishing than that of presenting his readers in detail the actual experiments themselves : the inferences ought to be left to the judgment of the reader, and not to be made dependent upon the *ipse dixit* of the experimenter.

The following is a summary account of these results, as they appear in the January Number of the Bibliothèque Universelle :—

1st. Animals are capable of supporting the injection of a considerable quantity of fluid into the lungs, without such injection proving fatal to life. Rabbits are capable of receiving in this way the quantity of four ounces and a half in twenty-four hours ; but it is necessary that these injections be made through an opening in the trachea : for if the liquid is thrown in by the larynx, symptoms of suffocation are induced, and the animal often dies. The suspension of respiration under these circumstances is the sole cause of death ; a suspension produced by the irritation excited in the muscles of the larynx by the injection.

2d. The symptoms of suffocation are not severe when only water is thus thrown in ; but they become much more so when heavy fluids, such as oil, are injected ; as these fluids choke up (*engorge*) the pulmonary veins ; and if chemical solutions are employed, the parenchyma of the lungs is injured, the oxidation of the blood is prevented, and inflammation and extravasation are the consequences.

3d. Fluids and injected solutions are absorbed in the lungs more or less promptly, according to their nature, and the degree of their concentration.

4th. This absorption is in general very considerable and conspicuous, but it is less so in animals that are very young than in older ones.

5th. The absorption is certainly effected through the medium of the pulmonary veins, for it takes place in the space of three minutes. The injected fluid is found also in the blood before it is seen in the chyle ; it is perceived too in the left auricle and ventricle of the heart, prior to the least traces

of its being observed in the right auricle : indeed, the absorption is effected even when a ligature is placed upon the thoracic duct.

6th. Absorption also takes place by the lymphatic vessels, but in a more tardy manner than by the veins.

7th. The veins of the stomach and intestines also exercise an absorbent faculty, but in a less marked degree.

8th. It is easy to demonstrate the existence in the blood of fluids absorbed by the veins ; one may recognize without difficulty prussiate of potash, muriate of iron, arsenic, &c. in this manner. Prussiate of potash, injected into the lungs, is first found again in the arterial blood of the heart and arteries ; and then, in the venous blood, if the injection be continued ; sulphate or muriate of iron, mixed with the blood, produces a green or blue precipitate.

9th. These substances are also found in abundance both in the urine of the bladder and the kidneys ; the prussiate of potash may be recognized in the urine as soon as seven minutes after the injection has been made into the lungs.

10th. Prussiate of potash is also deposited in considerable quantities in the liquor pericardii, in the secretion from the pleura, and the peritoneum, in the synovia, under the skin, and in the milk.

11th. After the injection of the prussiate of potash, this substance may be recognized not only in the fluids, but likewise in several parts of the solids. Many of these parts will be rendered either green or white by the muriate of iron ; the cellular membrane, for example, the fat, and the serous, as well as fibrous substances ; all the muscular aponeuroses, the tendons, the lateral and interior ligaments, as, for example, the round ligament in the ileo-femoral articulation, and the cross ligaments of the knee, may be tinged with a blue or green hue by the solutions of iron ; and the same takes place in the other fibrous parts of the frame, in the dura-mater, and the periosteum.

12th. The membranes peculiar to the arteries and veins, as well as the valves of the heart, may be thus made to receive a blue colour ; and when the injection is not continued a sufficient length of time to effect these extensive changes, we find that the mitral valve of the left ventricle is the part to be first changed.

13th. The actual parenchymatous substance of the liver and spleen does not become coloured with blue by these processes ; but the change is extended as far as the cellular membrane

surrounding their vessels. The lungs, the heart, and the kidneys are affected through their substance.

14th. A blue colour is given to the salivary glands, the pancreas, and the mammae.

15th. The colouring matter does not penetrate the bones or the marrow.

16th. The substances of the muscles, of the nerves, the brain, and the spinal marrow, are not changed in colour by the muriate of iron; these organs appear not to be endowed with either repulsive or exclusive power with respect to the contact of fluids which are not immediately concerned in their nutrition; and we seem, therefore, justified in the inference, that the opinions of those physiologists are unfounded in truth, at least that they are unsubstantiated by direct proof, which suppose that poisons display their deleterious power when applied to and acting upon the nervous organization.\*

17th. These experiments, which may be regarded as throwing some light upon the functions of secretion, nutrition, and reproduction of parts, also instruct us as to the passage of liquids from the mother to the foetus. When the prussiate of potash is thrown in, we are able to detect its presence in the liquor amnii, in the secretion from the chorion, in the vesicula umbilicalis, the liquid of the stomach, &c. and also in the placenta. When a foetus, to the mother of which has been given the prussiate of potash, is immersed in a mixture of spirit of wine and muriate of iron, it changes to a blue colour. Thus is established to demonstration the fact of a direct passage of fluids from the mother to the foetus; a fact which physiology had hitherto in vain endeavoured to ascertain. Fluids passing into the blood of the mother are deposited in the cellular tissue of the placenta, and are absorbed by the veins of the foetus."

Note by the Editors of the Journal de Médecine:—

"With respect to the last positions of Dr. Mayer, we recommend him to peruse the article *generation* in Majendie's work. In that article several experiments are recorded, which seem to be quite satisfactory as to the passage of fluids from the

\* We confess there is some obscurity to us in the original here, and we shall therefore subjoin the experimentalist's own words:—"Ces organes paroissent n'avoir ni force repulsive ni exclusive au contact des fluides étrangers à leur nutrition. On pourrait en conclure que les opinions de plusieurs physiologistes, qui disent que les poisons agissent mortellement quand ils sont portés sur les parties du système nerveux, ne sont pas bien fondées, et manquent de preuves directes."—TEANS.

mother to the foetus, and the absorbent faculty of the placental veins.”

*Lond. Med. Repository.*

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*In a pamphlet on the morbid Anatomy of the Brain, in Typhus Fever,* by T. MILLS M.D. of Dublin, the following appearances were observed on dissection.

“Vessels gored with blood, extending themselves through the substance of the brain, overspreading its lining membranes, the dura and pia mater and the arachnoid coat, and effusions between these membranes and into the cavities of the brain. These are analogous to the changes observed in phrenitis, in hydrocephalus, in apoplexy, and similar to those which are found in the cavities of the chest or abdomen, after a fatal pleurisy or peritonitis.

“While we pronounce without hesitation, that, in these cases, the changes are indicative of increased and inflammatory actions in the organs in which they are discovered, can we suppose in typhus fever, where analogous changes take place in the brain that the same disordered actions do not go forward?—especially since the appearances on dissection, by shewing the relation between the symptoms and the organic changes produced by disease, are explanatory of the phenomena.”

*Edin. Med. Surg. Journal.*

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*Moiré Metallique, or Fer blanc moiré.*—This is an article of Parisian manufacture, much employed to cover ornamental cabinet work, dressing boxes, telescopes, opera glasses, &c. &c. and is prepared in the following manner.

Sulphuric acid is to be diluted with seven or nine parts of water, then dip a sponge or rag into it, and wash with it the surface of a sheet of tin, which speedily will exhibit an appearance of chrySTALLIZATION, which is the Moiré.\*

This effect, however, cannot be easily produced upon every sort of sheet tin, for, if the sheet has been much hardened by hammering or rolling, then the moiré cannot be effected until the sheet of tin has been heated so as to produce an incipient fusion on the surface, after which the acid will act upon it and produce the moiré. Almost any acid will do as

\* The word Moiré signifies watered, as La Soie Moirée, watered silk.

well as the sulphuric, and it is said that the citric acid, dissolved in a sufficient quantity of water, answers better than any other.

The moiré has of late been much improved by employing the blow-pipe, to form small and beautiful specks on the surface of the tin, previous to the application of acid.

When the moiré has been formed, the plate is to be varnished and polished, the varnish being tinted with any glazing colour, and thus the red, blue, green, yellow, and pearl-coloured, moirés are manufactured.

*Lond. Med. and Phys. Journal.*

*Meteoric Iron.*—There is a character first pointed out in Germany, belonging to meteoric iron, which is, perhaps, not very generally known. It consists in the production of regular figures and crystalline facets on the polished surface of the iron, when moistened with nitric acid, analogous to those produced in the moiré metallique. This character has been found to belong to all the well known specimens of meteoric iron that have been tried, and as distinctly in the grains found in meteoric stones, as in larger masses of the metal; but it has been looked for in vain in the native iron of Charlesdorf, of Veiben, of the hill of Briandi (de Chladni,) of Peru, and in the mass at the Cape, first made known by Barrow and Dankelmann.

*Ibid.*

*Shower of Red Earth in Italy.*—A shower of red earth fell at Gerace, in Calabria, on March 14, 1813. The wind had been westerly for two days, when at two P. M. it suddenly became calm, the atmosphere grew cloudy, and the darkness gradually became so great as to render it necessary to light candles. The sky assumed the colour of red-hot iron, thunder and lightning continued for a considerable length of time, and the sea was heard to roar, although six miles from the city. Large drops of rain then began to fall, which were of a blood-red colour.

Sig. Sementini describes the physical properties of the powder as follows:—It had a yellow colour, like canella; an earthly, insipid taste; unctuous to the touch, and extremely subtile. When moderately heated it changed its colour, first to a brown, and afterwards to a black, and became red again as the temperature was raised; after it had been heated, many small shining plates were visible; it no longer effervesced with acids, and had lost about 1-10th of its weight. Its specific gravity was 2.07.

Its composition was,	Silex . . . . .	33
	Alumine . . . . .	15 1-2
	Lime . . . . .	11 1-2
	Chrome . . . . .	1
	Iron . . . . .	14 1-2
	Carbonic acid .	9
	Loss . . . . .	15 1-2
		100

So great loss was at first ascribed to some inaccuracy in the analysis, or to some body that had accidentally been mixed with the powder, but as it always occurred whatever care was taken in the analysis, he began to suspect that it depended upon some combustible matter essential to the substance. This suspicion was afterwards verified; and, by digesting the powder in boiling alcohol for a length of time, he obtained from it a greenish-yellow coloured matter, which, when dried, acquired a pitchy consistence,—was inflammable, and left a carbonaceous residuum. The author remarks, that the existence of chrome in this mineral seems to connect it with the aerolites, but the origin of the combustible substance is very obscure; there were no circumstances connected with the phenomenon which would lead us to suppose that it was of volcanic origin.

*Ibid.*

The *Dictionnaire des Sciences Medicales* contains the following remarks on the use of Belladonna, which seems likely to become a valuable article of the Materia Medica.

Numerous experiments, made during the last thirty years, on belladonna, enable us to appreciate pretty correctly the advantages of this vegetable. Notwithstanding the assertions of M. Muench, and the observation of M. Bucholtz, of Weimar, who assures us that he cured a case of hydrophobia, that had already unequivocally declared itself, by belladonna, we are constrained to reject all prospect of success from this remedy in rabies canina. Its inefficacy in cancerous affections has been demonstrated by many testimonies, but particularly by the experiments of M. Rahn, of Zurich. It appears to have been successfully employed as an anti-syphilitic in chronic cases unattended by inflammation. M. Boettcher, of Konigsberg, exhibited a composition of belladonna and calomel in phagedenic ulcers of the throat and of the genital organs with marked and rapid benefit. But it is in the class *neuroses* that belladonna has evinced its greatest power, especially in epilepsy and mania. J. E. Greding, physician to the Pauper Es-

tablishment at Waldheim, has been long employed in ascertaining the effects of belladonna in these diseases; and his experiments, published by his son in 1790, are interesting. Greding exhibited the powder of the plant, in cases of epilepsy, in doses from half a grain to a grain and a-half, three or four times a-day; also a combination of powder and extract (three parts of extract to one of powder) in doses from three to ten grains in the twenty-four hours. But, notwithstanding the apparent safety with which M. Greding administered the remedy, in these cases, we think the dose too large, since it occasioned in a young man the loss of vision for the space of twenty-one days. Administered to twenty-three maniacs, the belladonna did not effect a perfect cure in any one; but the force of the paroxysms was greatly moderated, and the morbid symptoms unequivocally ameliorated.

"I have myself (says Marc) employed the extract of belladonna externally, and with some success, in tic douloureux. A physician of my acquaintance assures me that he has cured an obstinate and chronic neuralgia affection of the face by the internal administration of this vegetable." There are few medicines whose utility in hooping-cough has been more decidedly proved than belladonna, and yet it is surprising that medical men should be so negligent in making use of it. M. Schaeffer administered this remedy to infants of one, two, and three years of age, every two hours, with great advantage. Several physicians, among whom we may cite M. Hufeland himself, have, since that period, tried M. Schaeffer's method, and all unanimously agree that belladonna may be considered as almost a specific in hooping-cough. This also accords with my own experience in three most obstinate cases of the disease. At this moment, I am giving the medicine to two young children afflicted with hooping-cough, and with decided advantage. During the epidemic prevalence of this distressing disease at Augsburg, in 1810, M. Wetzler treated thirty children by belladonna, and cured them all in a space of time varying from eight to fifteen days from the commencement of the remedy. M. Wetzler gave the root of belladonna in powder, mixed with a little sugar, in doses of a quarter of a grain night and morning, to children under twelve months, and in relative proportions as the ages increased.

The simplicity of this mode of treatment, its facility of application, even among the most indigent classes of society, and the little repugnance which children manifest towards the remedy, are all advantages which entitle belladonna to a more extended trial than it has yet obtained.

*Ibid.*

*On the Distortion termed Varus, or Club Feet; by A. COLLES, M.D.*

[From the Dublin Hospital Reports.]

Dr. Colles has found great advantage from attempting the cure of this deformity at a very early period after birth; at which time, the parts are most pliable, and require much less force to restrain them, on account of the delicacy of the muscles which the patient has not hitherto been accustomed to use with any considerable exertion. The apparatus is so simple, that a general idea may be formed of it without the assistance of the plate, which of course every one will consult before he attempts the same method of cure.

"The apparatus consists of a shoe made of chamois leather doubled, and having between its two layers a sole of strong tin interposed. The tin is cut to the size of the sole of the foot, having, however, two small projections left, one opposite to the ball of the great toe, and another opposite to the outer ankle. Each of these projections has a longitudinal slit, designed to receive the shouldered end of a splint. The splints are made of tin completely covered with chamois leather, except merely the shouldered end of each, which serves as a kind of tenant to pass down through the mortice-like slit in either projection, and which should be left of such a length as to admit a hole capable of receiving a bit of very narrow tape, or strong bobbin, below the sole of the shoe. The splint for the outer side of the limb is a narrow strip of an uniform breadth and shape; that for the inner side somewhat resembles the leg on which hoisiers stretch their stockings. They should each be about an inch broad, and of such length, as to reach up to that point where the leg swells out below the inner condyle of the tibia. The upper leather of the shoe is entirely open in front, being cut down through the middle, from the instep to the toe. Along the edges of this cut are four or five corresponding holes, through which the ends of a doubled lace are alternately passed crossways from the toe to the instep; and, to protect the foot from being injured by the friction of this lace, a false lining of soft leather is interposed, which is sewed underneath to one of the edges. The point of the shoe is completely open, the upper leather being cut away across the toes, so as to leave them entirely exposed. All the edges of the shoe, from heel to toe, are bound with tape or narrow ribband; and to the heel below the edging are sewed two straps of leather, of such a length as to cross

once or twice on the instep.—Such is the apparatus. The mode of applying it is as follows: The foot being introduced into the shoe, the assistant presses the heel of the shoe against the heel of the foot, while the surgeon laces it as tight as is necessary to keep the foot steadily in its position, and then secures the end of the lace by passing them once or twice round the foot, and tying them on the sole. He next crosses the straps of leather sewed to the heel once or twice on the tarsus, and ties them either on the sole or on the instep. The use of the shoe is to draw closer together the anterior ends of the metatarsal bones, particularly of the great toe, which stands off to a distance from the others, while it serves at the same time gently to press the bones of the tarsus into their proper places. The straps from the heel assist also in pressing these latter bones still farther into their natural position; but the principal use of these straps is to prevent the heel from rising up out of the shoe. When the shoe is adjusted, the splints are then to be applied; and the shouldered end of each being inserted into the longitudinal slit designed to receive it, two pieces of bobbin, each about two inches long, are passed into the two small holes below the sole of the shoe; and their outer ends being knotted, their inner ends are tied together across the sole. The limb is then brought into the natural position, and the splints being adjusted to it, so as to preserve it in that position, are secured in their places by two tapes sewed to the outer splint at convenient distances. The use of the splints is sufficiently obvious. The outer splint having its lower end fastened to the sole of the shoe, must, from the distorted state of the foot, have its upper end very much turned out from the leg. It is evident, therefore, that when this splint is pressed in against the leg, it must necessarily force the outer edge of the foot upwards, so as to bring the sole more into its natural position, the splint in this case acting as a lever, and the outer ankle serving as a fulcrum. Again, the inner splint being of one single piece, and being made in the same direction as the perfect limb, it is evident that when the leg and foot of the splint are firmly secured to the leg and foot of the child, the foot must, by the pressure on the ball of the great toe, necessarily be brought into a straight line with the leg; while, at the same time, the shouldered end of the splint must keep down the inner edge of the foot, and prevent it from returning into its original distorted position. In adjusting the apparatus, great care must be taken that the upper ends of the splints do not press against

the sides of the leg, so as to rub off the skin, and this will be best accomplished by bending these ends outwardly.

"The inner splint has in general a great tendency to slip backwards, and then, in the bended position of the knee, to excoriate the upper part of the leg. This may be guarded against by passing the upper tape of the outer splint in front of the tibia, then round the inner splint, and so back again to the outer side of the leg."

To prevent the apparatus from being wetted with urine, a napkin folded lengthways is wrapt spirally round the limb, from the toes to the knee. This the nurse is directed to change as often as it is moist. It serves also as a defence from the sharper points of the apparatus. The author concludes with some notice of the instruments proposed by others. Though he prefers his own, he very candidly suggest the possibility of differences in the deformity of different subjects.

*Lond. Med. and Phys. Journal.*

### *Account of an Epidemic Petechial Febricula ; by EDWARD PERCIVAL, M.B.*

"Two of the patients (says Dr. Percival,) one a child only five years old, the other an adult female domestic, were sent to me in Dublin, as specimens of the disease. The woman was then in the fourth day of her febricula. The chilliness, of which she had at first complained, had entirely subsided. Her tongue was thinly coated with mucus, her eyes were somewhat dull and watery, her pulse about 86, and perfectly tranquil. She had no giddiness of the head, pain, or cough, and complained only of languor, thirst, and impaired appetite. She had numerous small petechiæ, perfectly distinct, of a dun-colour, which she informed me appeared on the second day of her indisposition. The stigmata which I saw, were scattered on the neck, shoulders, and fore arm; and she told me there were similar spots on her loins and lower limbs. The child had contracted the same disorder about the same time. The petechiæ on her trunk and limbs were numerous, but more faded in their hue, than in the other case. She was lively, and occupied in her sports nearly as usual; yet her countenance obviously betrayed indisposition, her appetite was impaired, and her bowels costive.

"In each case, I directed only gentle purgatives, to be repeated when occasion required; and the children who remained at the school were treated in a similar manner. Had I been on the spot to watch the first access of the febrile symptoms, I should undoubtedly have tried the efficacy of emet-

ics or cold affusion, in cutting short the disease *in limine*. But the first stage being passed, no further occasion appeared for active interference.

"The duration of the febricula did not, I believe, exceed nine days in any instance, and the petechial eruption lasted about five days. No sequel of cutaneous or intestinal ailment followed. Some scattered cases of the disorder occurred in the neighbourhood of the school and the village of Delgany; but not a single case, (so far as I have been able to learn) degenerated into typhus fever.

"I am quite unable to conjecture the origin, or assign any probable cause of this remarkable febricula. It may be worthy of notice, that in the preceding winter (1815) a very slight morbillous epidemic appeared in Dublin, attended with the characteristic eruptions, but paler and more scanty than usual, with little fever or coryza. Its progress through two female schools fell within my own observation; and of the patients whom I attended, four experienced a second attack of the disorder, in a much severer form, within the space of three months. I at first doubted the accuracy of my previous observation; but facts of a similar kind occurring to other practitioners in the city, at the same time, I was confirmed in the opinion that my patients had twice undergone the measles in the course of one winter.

"But the petechial appearances in the fever before described, bore no resemblance to the morbillous eruption. Neither roughness or elevation of the cuticle were observed, nor even the marbled efflorescence, which often occurs in typhoid fevers. The spots were in fact precisely such stigmata as appear in the fevers commonly termed putrid or malignant, without any collateral symptom of inflammation, putrescence, or malignity.

"How far these facts will serve to throw light on the proximate cause of petechiae, I do not venture to determine. The disease termed *haemorrhæa petechialis*, ought to furnish further illustration of the same subject. The common theory of inflammation appears to me as little calculated to explain these diversified phenomena, as the obscure doctrine of putridity. Were I to indulge any conjectures on the subject, they would be founded on the disturbed balance of the venous and arterial systems—laxity of the subcutaneous capillary veins, and defective absorbent power of the capillary arteries."

*Some brief Notices of the Deleterious and the Medicinal Effects of Green Tea; by the same.*

In two cases,—one in the author's own practice, the other communicated by Dr. Hervy,—an over quantity of strong green tea induced palpitation, incubus, and something bordering an asphyxia. The first was greatly relieved by opium. This suggested to Dr. Percival the idea that tea might prove a better antidote against the effect of opium than coffee or many other remedies usually at hand. The following is the only case in which he made the trial.

"About four years ago, a very delicate valetudinarian lady swallowed two ounces of the camphorated tincture of opium, mistaking it for a purgative draught. I saw her about three hours afterwards, and found her overcome by deep sleep, so as scarcely to be roused by all the efforts of her attendants. We removed her from her bed to an erect posture in her chair, and fomented her legs. With great difficulty, I prevailed upon her to swallow a cup full of strong green tea, which soon proved emetic. After some bilious discharge from her stomach, she drank freely of the tea in a more diluted state, and in a few hours recovered entirely from the effects of her inadvertence. The quantity of opium which she had swallowed in the tincture, did not probably exceed four grains, from which no permanent ill effect might have been expected: but I did not trace, in the after course of the gouty disorder under which she then laboured, any vestige even of temporary mischief from the accident.—I mention these facts, rather as hints, than as affording any solid evidence for relying upon green tea as a remedy in cases of a more alarming nature." *Ibid.*

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A Case of Peritonitis has recently occurred in the person of Mrs. G. of Beech-street, two weeks after delivery, with all the customary symptoms of that frequently unmanageable malady. The ordinary antiphlogistic plan was actively pursued, without much apparent advantage, for two days, when (from a suggestion given by Dr. Bleghborough) I ordered a quart of warm milk to be thrown up the bowels as a fomentation: this had been done only ten minutes, when the uneasiness in the abdomen began to cease, and, in ten minutes more, had ceased altogether; and convalescence rapidly and completely supervened. *Lond. Med. and Phys. Journal.*

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*On the Operation for the Cataract.*

The object of this paper is a comparison of the two methods at present in use, of operating for the cataract, namely,

by extraction or depression. He observes first, that each method has been long practiced; Philoxenus, 270 years before the Christian era, having operated by depression; and Antylus having employed the method by extraction near the end of the first century. M. Roux is an advocate for the method by extraction, and states that out of 660 operations performed by him, for the most part on hospital patients, 400 have been attended with success. The committee, in their report on this paper, state that, out of 65 operations performed at the Hotel Dieu by the method of depression, 48 have completely succeeded. Hence they conclude that a rational practitioner will not bigotedly confine himself to either of the two methods, but will be determined in each case by particular circumstances.

*Lond. Med. and Phys. Journal.*

We pass over M. MAJENDIE's theory of the arterial structure, as requiring further experiments. At present, they proceed no further than was explained by Dr. Young some years ago in the Philosophical Transactions of London. The result of all the cruel experiments on the process of vomiting, we have before remarked, have been by Mr. Hunter demonstrated without the necessity of instituting any experiments directed immediately to that object. A few of MM. Portal's and Gerard's remarks are worth transcribing.

M. Portal, in a memoir on vomiting, after having cited the former experiments he had made, and in which, after cutting the muscles of the lower belly, he saw the stomach expand and contract with force when the diaphragm was thrown back on the breast, shewed the manner in which he conceived that the rejection of food is produced.

M. Gerard, Director and Professor of Anatomy in the Veterinary School at Alfort, has presented a paper on vomiting, as considered in different domestic animals. In general, the more the œsophagus in the cardia is towards the left, the more it widens the weaker and fleshy fibres which surround it; and the more the grand cul de sac is effaced, the more the pylorus is contracted; and the more the veil of the palate is moveable and drawn up, the easier the vomiting is. It is then much so in carnivorous animals, in which the stomach is little more than an oblique distension of the alimentary canal.

It is painful in the pig, where the bag on the left takes up half the place of the viscera, and where the œsophagus is very narrow, and lined with a thick fleshy layer. In the horse, when the stomach, at a distance from the muscles in the abdomen, is, besides the cardiac, near the pylorus, crossing

the coats obliquely, and strongly surrounded by fleshy layers, the vomiting does not take place in a natural state. It is still more rare in ruminating animals, on account of the complication of the four stomachs, and the singular manner in which the œsophagus joins them; but such vomiting may occur contrary to nature, and which is frequently followed by death.

\* \* \* Horses are generally supposed never to vomit, but at sea they often do. ENG. EDITOR. *Ibid.*

*On the Cause of the Disease termed Trismus Nascentium;*  
by A. COLLES, M.D.

In this ingenious paper, Dr. Colles produces many arguments to show, that trismus nascentium is the same as trismus traumaticus, and arises from the suppuration of the umbilical cord. He, therefore, proposes a variety of modes of treating the cord during separation, and acquaints us with the practice among the negroes of the West-India islands, in whose children this disease used to be particularly fatal. At present, it is scarcely known, and the difference is imputed to dressing the umbilical cord with spirits of turpentine, and plunging the infant daily into cold water. We would also suggest, whether a few experiments might not be made of leaving the cord untied, making the division not too early after the birth of the child, and carefully watching the event. Among the inferior animals, trismus nascentium, as far as we know, has not been observed. *Ibid.*

*Lunatic Hospital at Avignon.*

This hospital is under the management of the Lady Superior and twenty-five sisters of the Soeurs de la Charité; a director, his assistant, with two or three men-servants to clean the men's ward. Number of patients, one hundred; average dismissed cured, ten every year.

*Treatment.*—It is the principle of the director never to contradict a patient, but to appear to obey and execute his most extravagant wishes. The greater part of the patients enter this hospital with the strongest antipathies against some friend or public person; suspect a conspiracy against their lives or fortunes; and urge or plan the death or ruin of the persons exciting their resentment. The director patiently listens to their complaints, offers to execute their orders, how and when they please, and thus quickly gains an ascendancy over them. When their dress is worn out, he renewes it, in form and colour precisely as they entered the hospital. They are allowed food at any hour they think proper, by night as

well as by day. Plenty of water is always placed in their rooms.

One of the most difficult things is to induce them at first to keep their rooms clean. They are often apt to do every thing when it should not be. He gets the better of them by this easy management. There is a lad, nearly an ideot, that goes about the house and digs in the garden. When a room is dirty, immediately the director tells the patient that he is sorry that the poor ideot has contrived, by the negligence of the director himself, to slip into the room and dirty it. He entreats the patient to watch well that the ideot does not return. He rates and scolds the poor boy; and this, repeated two or three times, almost always induces the patient to be cleanly.

Neither strait waistcoats, nor ropes, nor chains, are ever used. There is a long gallery, with a range of small rooms on one side, and of larger rooms opposite. An outrageous patient is merely confined in the small room, in which is a bedstead, chair, and table, all screwed to the floor, with a straw matrass and blankets; no glass is in the windows, but iron bars, and outside Venetian blinds, that can be closed so as nearly to exclude the cold air, if necessary. When the patient is quiet, he is allowed to cross the gallery into the opposite room, while his own is cleaning out. When convalescent, the patients walk in an open gallery; in good weather in a garden, and attend regularly the chapel of the hospital.

"The great object we have always in view," said the Director, "is to keep the mind of the patient free from irritation, by giving him food whenever he chooses, and by appearing to obey his wishes against absent persons. We always urge, that his *bodily health* requires his remaining in our house.

"We never beat or threaten a patient, but impute, before him, any misbehaviour of his to another person. It was found difficult to get the women patients to cut their hair. As soon as we observe that they take notice of their own dress, we give them a small looking-glass, and, shortly after, persuade them it is the fashion to cut the hair short, and wear a neat cap." Five of the sisterhood attend daily by rotation. Meat and soups are kept warm in the kitchen night and day. Small wine is allowed the patients in moderation. Little or no medicine is used beyond common purgatives. A physician calls daily, but is not exclusively attached to the establishment.

The institution is supported by an estate belong to the hospital, which escaped the confiscation under the Republican government.

The above information was communicated at Avignon, in December 1816. *Edin. Med. and Surg. Journal.*

Dr. Morrison of Newry has nearly ready for the press, an Essay on the utility of Mercury in Typhus Fever. The mineral will be advised to be given in repeated doses, so as to bring, as early in the disease as possible, a new Febrile or Mercurial action. This being effected, the primary or morbid action will, in almost every instance, be found immediately to cease. The work will be illustrated by numerous cases, of which the present epidemic has unfortunately furnished too many instances. It will further appear by the essay, that there is always *local inflammation in typhus*, hence the early use of *wine and other stimulants* will be strongly deprecated.

*Ibid.*

*On the Magnetizing Power of the Violet Rays of the Solar Spectrum.*—The reported discovery of M. Morichini, respecting the magnetizing power of the violet rays, which was scarcely credited in this country, has received the confirmation of Professor PLAYFAIR, as related in one of the late numbers of the *Bibliotheque Universelle*. He gives the following account of an experiment of which he was a witness, and which was performed by M. Carpe.

After having received into my chamber a solar ray through a circular opening made in the shutter, the ray was made to fall upon a prism, such as those which are usually employed in experiments upon the primitive colours. The spectrum which resulted from the refraction was received upon a screen; all the rays were intercepted, except the violet, in which was placed a needle for the purpose of being magnetized. It was a plate of thin steel, selected from a number of others, and which, upon making the trial, was found to possess no polarity, and not to exhibit any attraction for iron filings. It was fixed horizontally on the support by means of wax, and in such a direction as to cut the magnetic meridian nearly at right angles. By a lens of a sufficient size, the whole of the violet ray was collected into a focus, which was carried slowly along the needle, proceeding from the centre towards one of the extremities, and always the same extremity, taking care, as is the case in the common operation of magnetizing, never to go back in the opposite direction. After operating in

this manner for half an hour, the needle was examined; but it was not found either to have acquired polarity, or a sensible attraction for iron filings. The process was then continued for twenty-five minutes more, (fifty-five in the whole,) when the needle was found to be strongly magnetic; it acted powerfully on the compass, the end of the needle which had received the influence of the violet ray repelling the north pole, and the whole of it attracting and keeping suspending a fringe of iron filings.

It is stated, that a clear and bright atmosphere is essential to the success of the experiment, but that the temperature is indifferent. At the time when the above experiment was made, about the end of April, the temperature was rather cold than warm.

*Annals of Philosophy.*

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## OBITUARY NOTICES.

Died at Edinburgh, on the 14th of June, in the prime of life, and the noon-day of his talents and utility, JOHN GORDON, M.D. F. R. S. E. Lecturer on Anatomy, and on the Institutions of Medicine, in Edinburgh. This lamented gentleman was cut off by typhus fever. However much we have differed from him occasionally on scientific questions, we can honestly say that we deeply deplore his untimely fate, and that we are not slow to feel virtuous sorrow for talents that promised well to medical science, thus prematurely quenched in darkness.

*Medico-Chirurgical Journal.*

In Hatton Garden, on the 20th of June, JOSEPH ADAMS, M.D. Physician to the Small-Pox and Vaccination Inoculation Hospital, Pancras, Lecturer on the Theory and Practice of Medicine, &c. A few days previous to his death, having quitted his carriage for the purpose of walking across the fields to his new residence near Holloway, he unfortunately stepped into a cavity of the ground, fell backward, and fractured his right leg; but was going on so well in the progress of cure, that he was pronounced to be out of danger on the day before his death. About two hours preceding his demise, he took his dinner with good appetite, and was remarkably cheerful, when a sudden and most unexpected change took place, of which he was so perfectly sensible that he dictated a prescription for himself, but, ere the messenger returned, he expired.—Dr. A. was the predecessor as well as the

successor to Dr. Fothergill in editing the London Medical and Physical Journal, and well known as the Author of several works which have contributed to promote the knowledge of disease no less than to advance his own reputation. He was the son of a respectable Apothecary in Bishopsgate Street or Spital Square, and commenced, we believe, his professional life as a general practitioner; after which he resided several years as a physician at Madeira, where he was succeeded by Dr. Andrews. Shortly after quitting that island for the metropolis, he became, by the especial privilege granted to the President of the College of Physician, a Licentiate of that body, the usual requisite of residence in a University having been dispensed with upon that occasion. As a Practitioner, Dr. A. maintained a most respectable rank in publick estimation; and in his intercourse with his professional brethren, his conduct was always marked with the urbanity of a gentleman and the liberality of a scholar. He was a zealous defender of the doctrines of his master, John Hunter, and gave to the world Memoirs of the Life of that celebrated Anatomist and Physiologist; a second edition of which work, with additions, was in the press, and nearly finished, at the time of his decease. Dr. Adams's Treatise on Morbid Poisons, as well as his other productions, met with a very favourable reception; and, in addition to the several works he had already written, he was preparing a complete edition of all Mr. Hunter's publications, when the indiscriminate hand of Death arrested his career, and terminated all his earthly pursuits.

*Kονφη σκια και ατωις ετιν αυδεγων Ειος!*

In London at an advanced age, SAMUEL MERRIMAN M.D.

At Philadelphia November 1818, JOHN SYNG DORSEY, M.D. Professor of Anatomy in the University of Pennsylvania.

WILLIAM GAMAGE JR. M.D. of this place, died the fifth of October last, in the thirty-eighth year of his age. We are not willing to allow this event to pass without a respectful notice of the deceased, for we sincerely lament the loss of him as a member of the profession. He excelled in activity and zeal, and he had made high attainments in professional science. The medical principles, which he had adopted, were of the best kind; such as have been maintained by some of the most eminent and most wise practitioners of our art. If he carried some of his principles to an excess, which sound judg-

ment should forbid, it was an error, which the greatest men have not always known how to avoid. If such a fault be chargeable to him, knowing his sincere love of truth and his perseverance in the search for it, we are authorized to say that time and experience would certainly have corrected it. We do not wish that any occasion of salutary criticism should be superceded by general eulogium. But let not those indulge in censure, who are destitute of that love of knowledge and of that enthusiasm for the extension and diffusion of it, which actuated the subject of these remarks.

The moral qualities of Dr. Gamage were such, as to attach to him most sincerely many friends of the first respectability. Those loved him best, who knew him most intimately. His temper was quick; but this was more than balanced by his perfect fidelity, by his undeviating integrity and by his benevolence.

Dr. Gamage, was cut off by phthisis pulmonalis, a disease, against which he had contended for a long time, but which was brought into activity by the common gastric fever of our country.

#### FOREIGN LITERARY NOTICES.

Mr. Curtis, Aurist to his Royal Highness the Prince Regent, has just published a second edition of his Introductory Lecture to his Course on the Anatomy, Physiology, and Pathology of the Ear, as delivered at the Royal Dispensary for the Diseases of the Ear, in 1816.

In the press, and immediately will be published, in one volume 8vo. illustrated with plates, Pathological and Surgical Observations on Diseases of the Joints. By B. C. Brodie, F.R.S. Assistant Surgeon to St. George's Hospital, and Lecturer on Surgery.

Dr. Armstrong is preparing new editions, considerably improved, of his three works on Scarlet Fever, &c.; Typhus Fever; and Puerperal Fever.

Dr. Henry is printing a new and improved edition of his Elements of Chemistry.

Dr. Bostock will shortly publish the History and Present State of Galvanism.

In the press, and speedily will be published, a Practical Treatise on Tropical Dysentery, more particularly as it occurs in the East and West Indies, illustrated by Cases and Dissections, By R. W. Bamfield, late Surgeon of the Belliqueux and Warrier, ships of the line serving in the East and West Indies, and author of an Essay on Hemeralopia or Night Blindness.

#### FOREIGN PUBLICATIONS.

Mr. Carmichael's Work on the Uses and Abuses of Mercury in Venereal Diseases. 8vo.

Practical Researches on the Nature, Prevention, and Cure of Gout, in all its Open and Concealed Forms: with a Critical Examination of some celebrated Remedies and Modes of Treatment employed in this Disease. By James Johnson, Esq. 8vo.

Transactions of the Medico-Chirurgical Society of London. Vol. ix. Part I. 8vo.

A Translation of Orfila's Elements of Chemistry, with Plates. Vol. i. 8vo.

Orfila on the Remedies to be used by Persons who have taken Poison. Translated by H. R. Black. 12mo.

Elements of Anatomy, for the Use of Students at the Royal Academy; with Plates. 8vo.

An Inquiry into the Laws of the Vital Functions, and Internal Diseases. By Dr. A. P. Wilson Philip, M.D., &c. Second Edition. Octavo.

Observations, with Cases Illustrative of the Sedative and Febrifuge Powers of Emetic Tartar. By William Balfour, M.D.

Memoir on the Congenital Club-Feet of Children, and on the Mode of Correcting that deformity. Translated from the Italian of A. Scarpa. By J. H. Wishart. With Plates. 4to.

A Manual of Practical Anatomy, for the Use of Students engaged in Dissections. By Edward Stanley, Assistant Surgeon and Demonstrator of Anatomy at St. Bartholomew's Hospital, in one vol., 12mo.

#### AMERICAN PUBLICATIONS AND LITERARY NOTICES.

A memoir on contagion, more especially as it respects the Yellow Fever. By NATHANIEL POTTER, M.D. Baltimore.

Medical and Surgical Register, consists chiefly of cases in the New York Hospital. By Drs. WATTS, MOTT and STEVENS, 8vo. \$1 50. New York.

History and description of the Epidemic Fever at Gardiner, Maine, in 1814. By ENOCH HALE, M.D. 8vo. pp. 246, \$1 50. Boston.

A discourse on Fever; delivered before the Massachusetts Medical Society, at their annual meeting in June 1818, at their request. By JAMES JACKSON, M.D. Professor of the Theory and Practice of Physic in the University of Cambridge. F. P. S. A. &c. &c. Boston, Wells and Lilly, 1818.

Reflections on Fever, and particularly in the inflammatory character of fever. By LYMAN SPALDING, M.D. New York, C. S. Van Winkle, 1818.

*Medical Botany.*—The third half volume of American Medical Botany, by Jacob Bigelow M.D. will be published early in this month. This part contains descriptions and coloured engravings of the following medicinal plants. *Pyrola umbellata*, *Gaultheria procumbens*, *Podophyllum peltatum*, *Ictodes fatidus*, *Statice Caroliniana*, *Asclepias tuberosa*, *Magnolia glauca*, *Cornus florida*, *Panax quinquifolium*, and *Polygonum senega*.

We understand that Dr. GEORGE BAYWARD of this place, is translating for publication, the valuable work of Bichat on General Anatomy. The first volume will come out in the course of the next spring.

# The New-England Journal

OF

## MEDICINE AND SURGERY.

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To the Editors of the New-England Journal.

Gentlemen.

**N**O TWITHSTANDING the able, and very valuable dissertation upon Blood-root, in Dr. Bigelow's Medical Botany, and other meritorious essays from the pens of Dyckman, Thatcher, the Bartons, &c. still the powers of this valuable indigenous article do not appear to me to have been justly appreciated. So much use is, at present, made of it, and in such a variety of diseases, and with so great success too, that with us, the questions are frequently asked, What did you formerly employ, before you became acquainted with it? What one article of equal efficacy, could be substituted for it? &c.

Having had considerable experience in its use, and free communication with gentlemen who have administered it as extensively as myself, I have drawn up the following concise sketch, as a summary of our experience: and although it should contain nothing new, yet I cannot but flatter myself, that it may perhaps afford rather more numerous, and possibly better methodized hints for future observation, than any thing that has hitherto appeared.

If it comes within the plan of your Journal, I should be gratified to see it published.

Yours, Gentlemen very respectfully,

WILLIAM TULLY.

Middletown, (Conn.) 15th Dec. 1818.

## SANGUINARIA CANADENSIS. LIN.

*Blood-root. Blood-wort. Red-root. Puccoon. Indian-paint. Turmeric. Ord. nat. Rhæadæ. Lin. Papaveraceæ. Juss. Canada. United-States. Florida.*

**T**HIE root only of this article is employed in medicine. It is bitter and acrid to the taste, and according to the best analysis, consists of a resinous, a bitter, an acrid, and a colouring principle, together with a portion of fecula, and fibrous or woody matter.

Taken internally, in moderate doses, it increases the excitement of the sanguiferous system, augments the action of the lymphatics of the viscera, excites appetite and promotes digestion. In larger doses, it nauseates, diminishes sanguiferous action, and still further increased, it vomits. In improper quantities, it vomits with much violence, produces heart-burn, faintness, dizziness, diminished vision, and great prostration of strength. Snuffed into the nose, it excites sneezing, and applied externally, in diseases of the skin, or to the surface of ulcers, it irritates, promotes absorption, and changes action. It may therefore be considered as tonic, deobstruent, emetic, narcotic, sternutatory, *antipsoraic*, and escharotic. By suitable management, and qualification, it may be made to produce the most useful effects of squill and senega, without their tendency to vomit and purge ; of fox-glove, without danger of prostrating the powers of life ; of ammoniacum, and guaiacum, without their occasional irritation ; and of the mineral tonics, without their slowness.

As an emetic, the powder or pill may be administered in doses of ten or twenty grains, or better, an infusion or decoction, made in the proportions of one drachm of the root, to four ounces of water, which may be given in doses of two or four drachms to be repeated at short intervals, till it vomits. For this purpose, it may frequently be used with advantage, to remove that state of predisposition to disease, which is marked by languor, lassitude, anorexia, &c. also in the early stages of pneumonicula, pneumonia-typoides, catarrh, and phthisis-pulmonalis ; and likewise in Pertussis, and Icterus. If given early in cynanche trachealis, it may be considered as almost a specific.

As a deobstruent, tonic, and narcotic, the powder or pill may be given, at regular and short intervals, in doses of three or five grains, or the tincture or wine, made in the proportion of

two ounces of the root to one pound of spirit or wine, commencing with about fifteen drops, at periods of three, four, or six hours, and gradually increasing the quantity, as the stomach will bear, to sixty or eighty. When administered with these intentions, it should almost always be combined with opium, which not only increases its general efficacy, but lessens its nauseating tendency. For all the variety of cases to which it is adapted, with these views, but two forms are necessary; and these seem preferable to every other. The first, which is more especially intended for children, may consist of equal parts of camphorated tincture of opium, and tincture, or wine of *Sanguinaria*; the second, which will commonly be more proper for adults, is formed of one part simple tincture of opium, and three parts tincture, or wine of *sanguinaria*.

It is remarkable, that Blood-root, although not known to purge, or strictly speaking, to prove laxative when taken by itself, is nevertheless capable of completely obviating any constipating effect from opium combined with it, even when in considerably larger proportion than is here recommended, and that too in habits naturally costive; and although it seems never to be diaphoretic, yet it is usually an efficacious expectorant.

The diseases in which it may be advantageously used, in the last mentioned forms, and with the last mentioned intentions are

1st. *Pneumonicula*, or that sub-acute inflammation of the lungs, which, in consumptive habits, so often precedes a rapid phthisis. After a slow cathartic of calomel, suitable epispastics, and perhaps calomel and opium in small doses, sufficient to produce a very slight effect upon the mouth, the remainder of the cure, may in general be trusted to *sanguinaria* and opium.

2d. In *pneumonia typhoides*, after proper evacuations, and blistering, it proves an important adjuvant to the course customarily necessary. Indeed in quite moderate cases, the preparations in question are alone amply sufficient for the secondary stages.

3d. In *catarrh*, after evacuations, nothing more than *sanguinaria*, in the first form of combination, is commonly necessary.

4th. In confirmed phthisis pulmonalis, this article, for the purpose of combating and palliating symptoms, and thus prolonging the life of the patient, is perhaps of more value than any thing else.

5th. In *pertussis*, if vigorously administered, and faithfully persevered in, it is one of the best remedies.

6th. In *Icterus*, it excites healthy action in the liver, and gives tone.

7th. In *hydrothorax*, not depending upon organic affection, simple Blood-root, given three or four times a day, in a nauseat-

ing dose, and continued for several weeks, often lessens the frequency of the pulse, occasions absorption of the fluid, and leaves the system in such a state of tone, as to prevent a return of the complaint.

8th. In rheumatismus, in a variety of cases, it has been found, with sufficient opium, to supply the place of guaiacum.

9th. In asthenic amenorrhœa, or chlorosis, it sometimes restores tone, and proves emmenagogue. Indeed when taken freely by females, it has in some instances produced menorrhagia, and in others, cured leucorrhœa, but these are supposed to be rather accidental effects.

10th. In gonorrhœa, and the bites of venomous reptiles, it may be considered as efficacious for internal use, as any remedies hitherto proposed.

11th. In many of those cases of debility, and loss of appetite, in which quassia, columba, or gentian are used in combination with super-sulphate of zinc, Blood-root alone is a good substitute for the metallic tonic.

As a sternutatory, the dry powder of this root is capable of answering all the indications, for that class of articles. When snuffed into the nose, it has cured some cases of soft sarcoma; and it is especially considered to be useful in this way, after an operation, for the purpose of checking the growth of a new tumour, when symptoms of it appear.

As an escharotic, and *antipsoraic*, the juice has cured some warts, the powder has improved some indolent and ill-conditioned ulcers, and the infusion or decoction, as a gargle, has relieved cynanche-maligna, and as a lotion, has been serviceable, in cases of the bites of venomous reptiles, and in that peculiar erysipelatous eruption, which is caused in some persons, by contact with acrid and poisonous plants.

*Quere.* Might not Blood-root answer well, as an emetic, early in a paroxysm of asthma, and afterwards, in the secondary stages, in small doses, in combination with opium?

Although sanguinaria has been recommended in dysentery, yet it does not seem to promise much in that disease.

It is a circumstance, which greatly lessens the value of Blood-root, that its powers are very much impaired by age. The recently dried root possesses the greatest activity, but in the course of a few months, its virtues are diminished, as much as one half, and perhaps more. The same is true of the tincture, and the wine, but the latter retains its efficacy the longest. The dose therefore, must be in some measure regulated by the age of the preparation.

The leaves are supposed to possess deleterious properties, and the unripe seeds are said to produce symptoms, not unlike those from the American species of *Datura*.

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*Case of Tænia.* By GEORGE HAYWARD, M. D.

[Communicated for the New-England Journal of Medicine and Surgery.]

THE efficacy of the spirits of turpentine in expelling tænia and other worms from the intestinal canal is now well known to professional men. It is not, perhaps, so generally understood in this country at least, that a large dose of this medicine can be administered with perfect safety; and that it operates as a cathartic usually in from two to four hours, with little or no pain, while a small one oftentimes produces great heat and irritation, and a most distressing strangury, without any alvine discharges. As the following case shews the importance of attending to this fact, it may perhaps be thought worth publishing.

A patient, who had returned a few days before from the East Indies, called to consult me for a complaint, which he supposed arose from diseased liver. He originally contracted it, he said, about nine years before on the coast of Africa, and had been afflicted with it ever since. He had a singular sensation in his right side, directly under his ribs, as if an animal was gnawing there; his appetite was voracious and perfectly insatiable, for he could eat during the whole twenty-four hours, and relished almost every thing equally. His food did not oppress him, but he lost flesh and was considerably emaciated when I saw him. His strength was so much impaired, that he found himself unable to go to sea again. He had repeatedly taken medicine for a supposed obstruction of bile; and two years before underwent salivation without obtaining the slightest benefit. Upon a full examination of his case, I could discover none of the ordinary symptoms of jaundice; and when he told me, that he had often times passed white pieces of skin perfectly flat, I had little hesitation in saying, that I thought he had a tape worm, and desired him, if any more pieces came from him, to save them. On the following day, he showed me ten or fifteen, which he passed in the night, which were evidently joints of the worm. A cathartic consisting of the sub-muriate of mercury and rhubarb, was given, with a view of removing every thing from the intestinal canal,

that might screen the worm from the action of the turpentine. After this had operated thoroughly, and before any food had been taken, an ounce and an half of the spirits of turpentine was administered; no inconvenience was experienced from taking it, though it was unmixed. The patient was directed to take an ounce and an half more, if this did not operate on the bowels in four hours, and an ounce of castor oil if much pain and irritation were created by either dose. I did not see him until the following day, when I learnt that the turpentine had operated three times copiously within four hours after it was taken, and that a large quantity of worm had come away. The medicine had not produced any unpleasant symptoms. Upon examining the worm, I found it broken into pieces, varying in length from three inches to three feet; the whole measuring twenty-five feet. It was quite soft, having nearly the appearance and consistence of jelly; the head was easily discovered. The patient thought he knew the moment when it was detached from the intestine; the gnawing had entirely ceased in his side. About eight hours before my visit, he had imprudently taken a table spoonful of turpentine, thinking that some part of the worm might be still left. It produced a violent pain in his bowels, but no discharges from them; and an hour or two before I saw him, a most distressing strangury had come on, more violent than I had ever before witnessed, and attended with a greater loss of blood. I directed him to take an ounce of castor oil, drink freely as possible of flax-seed tea, with gum arabic dissolved in it; and ordered him an enema of the same tea, with sixty drops of laudanum. In a very short time he was relieved by these means, though a great degree of soreness continued in the bladder for several days. All his old symptoms entirely disappeared, and he has not enjoyed his health so well for nine years.

At the end of three months, however, he felt some symptoms of another worm, and in the course of a day or two passed several pieces. Upon taking some cathartic medicine, thirty or forty joints of the animal were brought away. He then applied to me again. I directed a cathartic to be taken late at night, and in the morning after it had operated, six table spoonfuls (each containing at least half an ounce) of undiluted turpentine upon an empty stomach. These directions were strictly complied with, and in less than two hours after taking the turpentine, a live worm twenty seven-feet in length was brought away. The animal was perfectly whole, and so different in appearance from the other, that at first I thought it not impossible, that they might be different species; it however occur-

red to me afterwards, that the soft, gelatinous appearance of the other was owing to the greater length of time that elapsed between taking the turpentine and the expulsion of the worm, which gave an opportunity for the intestinal juices to act upon the animal. The patient experienced no inconvenience in taking this large dose, nor any previous to its operating; it occasioned considerable warmth in the stomach and bowels, but nothing that amounted to pain. I was satisfied, that the whole animal was expelled, but as the patient had some doubts upon the subject, he took a cathartic the following night, and six table spoonfuls of the turpentine in the morning as before. It operated in about three hours, but brought away no more worm. It gave him considerable pain, and a slight strangury came on, which however continued only for a short time.

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*Extracts from a letter to AARON DEXTER, M. D.*

[Communicated for the New-England Journal of Medicine and Surgery.]

**T**HE following case of *Puerperal Convulsions*, (successfully treated,) terminated in the life of both Mother and Child.

I was called to a woman in August last, attacked with convulsion fits; she was about thirty-seven years of age, of a good constitution, and was the mother of seven children; but was not so well in this pregnancy as she had been in the like situation before. The convulsions were very severe, and about one hour between the fits, I was informed by her mother that she was in the last month of her pregnancy, but that no symptoms of travail had taken place. Her understanding was so far gone that I could obtain no information from her. Concluding she must sink or a delivery of the child be effected, I immediately opened a vein in the arm, and took away thirty-four ounces of blood—cut the hair from her head, and applied cold vinegar to it—ordered a clyster to empty the bowels. The convulsions abated for four hours, then returned with great force. Upon examining the *Os uteri* found a dilatation about the bigness of half a cent. I endeavoured to enlarge it, so as to effect parturition. As there was a total loss of reason, her husband and friends began to be very much alarmed at her situation. I mentioned if they wished the consultation of a physician, I would state her situation, and accordingly did to

Dr. William Cutter of Portsmouth, and requested his attendance. Upon a conference with him upon her case, we concluded to expedite delivery by a moderate dilatation of the *Os Uteri*, which was effected in about three hours. The convulsions continued. We gave about thirty grains of the ergot (as the child had a natural presentation) about one hour before delivery, which excited some nausea, and an apparent action of the uterus. By thus hastening the birth of the child, I effected its delivery. In about an hour *after*, the convulsions returned. I immediately shaved her head and vesicated the whole of it—the epispastics were also applied one on each leg: this being on Monday the 1st of August, I left her, and on Tuesday visited her again. The convulsions continued, and I took away twenty ounces of blood, and put her into the warm bath. On Wednesday she lay in a stupor, with frequent startings, and on hearing a noise a fit took place. I gave her the *fætid gums, castor, rad. valerian,* and strong sinapisms were applied to her feet. On Thursday she appeared to have some reason. I continued the fœtid pills, valerian infusion, &c., and kept up an action on the skin by blisters. On Friday her reason was partially restored. The convulsions had ceased, and she began to make some inquiries concerning herself and family, but was delirious. On Saturday her reason was more perfect, and seeing the child in the room, she asked whose it was; on being told it was hers, she was much agitated. On Sunday she was still better; kept her quiet and free from noise and light, and allowed her light food. She continued to grow better, and recovered rather slowly, being greatly debilitated by her sickness, but by the assistance of the bark wine and the sulphuric acid, she is now in good health and the child likewise. She has not been able to nurse the child as she did formerly, there being a deficiency of the secretion of milk in the mammae.

Yours, &c.

WILLIAM LYMAN.

*Remarks on the Fracture of the lower extremity of the Radius.* By JOHN P. BATCHELDER, M. D.

[To the Editors of the New-England Journal of Medicine and Surgery.

Gentlemen,

**P**ERMIT me to draw your attention to an accident, which frequently comes under the eye of the surgeon, and which, judging from the consequences that so frequently follow it, is not very well understood either in its nature, or method of treatment. The accident to which I allude, is the fracture of the radius about an inch and an half or two inches above its lower extremity. When the bone is fractured at that place, the supinator longus, the extensor carpi radialis longior and brevis, and the three extensors of the thumb must all unite in turning the hand upward and outward.\* The lower fragment of the radius, the carpus, and the ends of the metacarpal bones, following the hand in this movement, cause a swelling below the injury, and on the outside of the arm, which might be, and frequently is, mistaken for a dislocation of the wrist outwards. The pronator radii teres and quadratus, draw the fragments, at the fracture *inward* and towards the ulna: and, by pressing the flexor tendons inward, cause a swelling, which extends from one third of the length of the arm upwards down to the wrist. Opposite this swelling on the outside of the radius is a considerable depression. While the hand is drawn upward and outward, as before described, the inferior extremity of the ulna seems to fall down in an opposite direction, and generally is quite moveable. It is impossible for the patient to perform the motion of supination and pronation by the muscles alone. The reason for this will be presently assigned. A late writer on this accident has informed us that if the surgeon lock his hand in that of the patient, and make extension, the arm immediately resumes its natural shape, and that the fractured ends of the bone may be made to move at the place of the fracture by moving the patient's hand backward and forward; and if the surgeon apply the fingers of his other hand to the place of the fracture, he will be sensible of the motion of the fragments. This, I believe, is invariably true. A crepitus is seldom if ever perceived. In the sound state of these parts the prona-

\* I do not mean to use outward and inward in the common anatomical sense. When I use the former I beg to be understood as meaning that side of the arm, on which the extensor muscles lie, corresponding to the back of the hand. Inward I use in the opposite sense, i. e. to the side of the arm, corresponding to the palm of the hand.

tor radii quadratus antagonizes the supinator longus, and the radial extensors of the wrist and thumb, which act in some degree as supinators; but when the radius is broken, that muscle co-operates with those in displacing the fragments, and its effect is greatly increased by the falling down of the ulna, as described above. Here also we find an explanation of the patient's inability to perform the rotatory motions.

I come now to the method of treating this accident. After some failures in treating this injury I was led from considering the anatomical structure of the arm to adopt the following method which has been, during nine years practice, attended with the most perfect success in every instance.

After making extension and counter-extension, and adapting the parts to each other, if the extension have not brought them in apposition, a compress extending from near the bend of the arm to the wrist, is applied along the inside of the arm, and a similar one on the outside.

Against the radius at the place of the fracture the thickness of the inner compress should be considerably increased. In addition to the long compress on the outside, another compress should be applied transversely against the lower end of the radius and carpus, which projects outward. Over these compresses apply two splints, extending from the elbow to the ends of the fingers, and somewhat wider than the arm, especially at its lower part, and confine the whole with a roller wound with tolerable firmness, from the elbow to the lower end of the ulna. The pressure of the splints upon the compresses forces the flesh into the interosseous space, and hinders the upper fragment from approaching the ulna by counteracting the pronator radii teres; it also counteracts most of the other displacing causes as well as prevents all lateral motion. In counteracting the quadratus muscle, we must not lose sight of the shape of the lower ends of the ulna and radius, nor of the manner in which they are joined; nor forget that the point of articulation must be the fulcrum; that that portion of the radius, which is below the fracture, and into which the quadratus is inserted, is the lever, and the carpus and hand the weight raised by the quadratus, acting upon a lever of the first kind, and by the supinator longus, and extensors upon a lever of the second kind. If we reverse the position, after taking off the agency of the supinators and extensors by our splints and compresses, the weight of the hand will be quite sufficient to counteract the quadratus muscles. This power can be easily employed by placing the arm in a sling in a state between supination and pronation, and allowing the hand to hang down over the end of the ulna. In about twenty days motions of flexion

and extension, supination and pronation, should be impressed by an assistant upon the limb for half an hour twice a day. At first they should be gentle and increased, until the patient can perform all the motions with perfect ease.

Charlestown, N. H. May 4, 1818.

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*Experiments on Digestion in man. Presented October 5th  
to the National Institute, by M. MONTENEGRE.*

[Communicated for the New-England Journal of Medicine and Surgery.]

**H**AVING met with an individual, who had the power of rejecting from his stomach whatever it contained without making a considerable effort, M. Montenegro, determined to undertake a series of experiments with a view to ascertain, 1st. What is the nature of the *gastric juice*, supposing that such a fluid actually exists, 2d. What action this fluid may have on alimentary substances, exposed to its action.

The person, who was the subject of this experiment, threw up two or three mouthfuls of this gastric fluid, in the morning, while fasting, which on being examined appeared to possess the following properties. It was frothy, a little glutinous, somewhat turbid, and held in suspension small portions of mucus, of an acid taste, not disagreeable. It irritated the throat, did not set the teeth on edge, but acted on them so as to give a rough or pointed feeling to the tongue applied. It reddened the syrup of violets and the tincture of turnsol.

He then divided a small piece of broiled beef into three parts. This was very much chewed and placed in a small glass tube with gastric fluid and saliva. The second, equally chewed was placed in a glass tube with saliva only. In a third tube he introduced the remaining portion, not chewed but well cut up, and added to it pure water only. The three tubes well corked and numbered, were placed in the armpit under a woolen waitscoat.

After remaining there twelve hours, the first and second tubes sent forth a most offensive smell of putrefied meat, without any sensible difference between them. The third exhaled also a putrid smell, but much less strong; and the putrefaction was visibly less advanced, than in the two others. Eleven similar experiments were made in succession with the same care.

From all these it appeared, that the gastric fluid is sometimes acid and sometimes not acid: that in the last case it

putrefies exactly like saliva : that it does not exert any anti-septic action on the food, except when it is not acid ; but that saliva, which has acquired an equal degree of acidity by means of the acetic acid, produces effects perfectly similar. This acidity seems to be essentially necessary in the digestive process.

The following then are the results, which the author has obtained.

1st. The gastric juice or liquor, which is always found in the stomach fasting, in greater or less quantity, is nothing more than saliva.

2d. We cannot therefore consider this gastric liquor as a solvent, *sui generis*, whose peculiar properties render it proper to prevent the putrefaction of animal matters, and still less, to perform true digestion, independently of the action of the stomach.

3d. The acidity, which this liquor frequently possesses, is an alteration produced on the saliva by the stomach. The alimentary matters undergo a similar change.

4th. The passage of the alimentary substances to the acid state is a natural consequence of the action of the stomach upon them, and its degree must depend on their chemical composition, as well as on the actual state of the stomach.

5th. The principal use of the saliva, and the gastric liquor is to liquefy the solid aliments, and no doubt to communicate to them a first degree of animalization.

In spite of all his efforts the author could not succeed in obtaining the gastric acid in a separate form. He is however led to conclude by analogy that it is simple acetic acid. He confesses however, that its strong action on the throat, even in a diluted state ; its peculiar operation on the teeth, rendering them rough without setting them on edge ; and especially its fixity, since it never sends out an acid smell, however strong it may be, are circumstances which would suggest the probability of its being a peculiar acid, and that therefore the subject must remain open for further investigation.

The commission of the Institute, Bertholet, Cuvier and Ténard, admit the truth of the conclusions drawn by the author from his experiments. They praise him for the industry and accuracy of his researches, but they are not willing to admit the probability of his opinion that digestion consists in a separation and absorption of the nutritious part of the alimentary substances by a peculiar action in the vessels of the stomach, which M. Montenegro has called *an elective and vital action*.

**Theory of Conception.** By JOHN STEARNS, M. D. of Albany.

[Communicated for the New England Journal of Medicine and Surgery.]

**A**MONG the various theories invented to explain the process of conception, I have found no one exempt from difficulties. They are generally too complex and intricate for the simple operations of nature: such is the theory of absorption, which pursues the semen through the round of circulation to its final reception into the ovaria; or by the shorter course of vessels yet undiscovered; or through the lymphatics of the vagina, whose action the author has reversed for this express purpose.

Those are certainly more consistent who trace it directly to the uterus. This is the natural course, and one that is peculiarly adapted to this important process. Let us then cease to search for labyrinths which nature rejects, and pursue her through that plain and simple path which she has clearly indicated.

Naturaliter uterus absque vacuo est, et latera ubique inter se contingunt. In congressu venereo uterus se dilatat, unde fit vacuum pro ratione extenti spatii. Appendices uteri simili-  
ter afficiuntur, ac uterus ipse. Ex vagina contrahente cum  
pene in ore uteri, utero extento et Tubis Falopii Ovaria cir-  
cumplecentibus, quid tum postea? Nonne semen et ovum  
attraherentur ad uterum pro vacui amplitudine. In modo  
simili, aer in pulmones, sanguis in cor et semen et ovum in  
uterum attrahuntur. Si semen et ovum tempore eodem conve-  
niunt, conceptio necessario fit. Ovum et semen fundo uteri  
æque distantia, ergo in uterum eodem tempore attrahentur.  
Hoc parvi refert quo tempore ovum gravidum fit, instanter, aut  
post 10, 24, 48 horas, sed experimenta cæteris animalibus, hu-  
mano generi non convenient. Nam omnia, modo simili, non  
propagantur. Huic tantum urgeo ovum in utero non in ovario  
gravidum redditum esse, et res supra dictas, legibus naturæ  
evenire. Os uteri coagulo occluditur, statim post coitionem,  
quod omnino ad conceptum expedit, et vacuum manet, opere  
conceptionis procedente; posteaquam vero hæc occlusio non  
necessaria, amoveatur sine injuria Fœtus, et menses aliquando  
recurrunt, in utero gravo.

I shall not discuss the question, whether the semen or ovum, or both in conjunction, generate the homunculus; but I am disposed to ascribe to the female ovum all the properties of an embryo in a latent state, and to the male semen the power of

exciting them into vital action. The latter seems well adapted to form a nidus for the former, by which it is perfectly enveloped, surrounded and attached to the fundus uteri; thus perpetuating to the foetus the vacuum which the orgasm had commenced.

The extra uterine foetus would, probably, never have arrived to perfect vitality, for want of its appropriate nidus and exciting power, but may be compared to those eggs in fowls, which, although they grow to the ordinary size without the coitus of the male, are destitute of the power of propagation.

I am also aware of the common objection, that this theory will not explain conception through an imperforated hymen; but in this case the semen will be always transmitted, by the impellent operation of the vacuum within, through the opening reserved for menstruation.

The destruction of the natural sensibility of the uterus will render it incapable of expanding, and the great relaxation of the vagina will deprive it of the power of contracting sufficiently to exclude the external air; and thus in both cases, that vacuum will not be formed which is necessary to ensure conception. This will, therefore, explain the cause of sterility in a variety of obvious cases.

*Quere.* Has the extra uterine foetus been known to live after separation from the mother?

We add the following interesting case by Dr. Delisle, communicated to the *Société Medicale d'Emulation* of Paris, in answer to Dr. Stearns' question.—ED.

"A lady, aged thirty, and of a delicate constitution, after having been some months married, exhibited, in November 1816, the symptoms of pregnancy in an unusually severe form, with violent pains in the hypogastrium and about the anus. They were relieved by the employment of anodynes; but, in December, recurred more than once with increased severity. The same remedies now failed of success. The employment of vermifuges, indicated by the expulsion of lumbrixi, was unavailing; and a whitish and flocculent discharge took place from the vagina. In January 1817, rending pains were felt in the whole hypogastrium, especially on the right side. The evacuation of urine and faeces was effected with difficulty. The abdomen was large, irregular, tender, and very tense, especially in the lower part. Appetite variable; obstinate sleeplessness; face pale and dejected; vaginal discharge continuing. On examination, a round, fleshy, elastic, immoveable tumour was found low down in the vagina, a little to the right, resting firmly on the lower part of the rectum, and filling a portion of the

pelvic cavity. The cervix uteri, quite natural, was situated high up, in a vertical direction, immediately behind the pubis, some little to the left, and appeared to be continuous with the tumour, particularly towards the right; for the left could not be explored sufficiently high. The tumour was considered as inflammatory; and fomentations, glysters, and diluents were prescribed with transient relief. On the 22d the discharge recurred, with severe hypogastric pains, which were relieved by the expulsion of some small coagula. On the 23d the vaginal tumour was sensibly increased, and descended below the level of the os tincæ; which was large, open, dry, immovable, and continuous with the anterior part of the tumour. The posterior inferior part of the latter was felt by the finger introduced into the rectum. The evacuation of urine continued painful; and a small quantity only was discharged by the employment of a catheter. Retroversion of the uterus was now suspected to exist, complicated with pregnancy, but every effort at reduction was unavailing. On the 25th, debility and constant suffering without fever: the abdomen large and very painful, with a distressing sensation of very tight pressure around it. Puncture of the uterus was now determined on in the event of an aggravation of the symptoms; and the anodyne treatment, meanwhile, was continued. About ten days afterwards, a discharge of blood from the vagina took place, and was productive of some relief.

"From this period till May, no decisive alteration was observed. The tumour continued to grow, and completely filled the pelvis. Leeches were once applied to the perineum with advantage: and purgative and vermifuge remedies were again tried in vain by the direction of another physician.

"Dr. Delisle, again summoned on the 10th of May, found that the patient had, for three days, experienced pains in the abdomen and loins, resembling those of labour; and that a sac of water, as large as an egg, had been protruded from the vulva, whereupon a midwife had been sent for under an impression of pregnancy, farther confirmed by an evident sense of motion in the abdomen.

"The woman was now in bed, very feeble and emaciated, with a dry cough, and tight respiration, effected almost exclusively by the abdominal muscles; small frequent pulse; dry burning skin, and flushed cheeks. Dry cough with fever, pain of the side, with bloody expectoration, which occurred some weeks before, had been succeeded by irregular shiverings: and hence the existence of an acute pulmonary affection, terminating in suppuration, was inferred. On examination, a pyriform tumour,

of the volume of an egg, was found protruding from the vulva. It proved to be the cervix uteri, with part of the body tumified and elongated. Its orifice was slightly open. It descended in a direction somewhat from the left, and drew with it the canal of the urethra; the orifice of which was turned upwards. The reduction of these parts was readily effected; but they returned on the slightest effort. Through the parietes of the vagina, near its entrance, was felt a hard, round, somewhat unequal tumour, completely filling the cavity of the pelvis, and offering, by the projection of ribs and the posterior border of a scapula, the decided characters of one side of the thorax of a foetus. During the examination, the woman at times experienced pains, and made efforts by which the tumour was pushed strongly downwards, and the uterus was more protruded, without, however, any change in its figure.

"Convinced of the existence of an extra-uterine foetus, and of the necessity of decisive measures in the present situation of the patient, Dr. Delisle determined on making an incision in the most prominent part of the vagina. This was effected, in a crucial form, by a bistoury introduced between two fingers. A quantity of water, with a few drops of blood, escaped from the opening, which was now gradually dilated, and the left side of the thorax was found presenting. The two feet having been successively disengaged, the head followed with some difficulty; and thus a living female foetus was extracted. It was well formed, but diminutive, and seemed to be the product of a six or seven months' pregnancy. The funis was very weak; the eyes open. The limbs moved freely about; and the infant uttered an acute and plaintive cry.

"About fifteen minutes after delivery, trifling haemorrhage came on, while the pulse gradually sunk, and the respiration became tight. The abdomen yet presented above the pubes a small globular tumour, apparently formed by the uterus. On the introduction of a finger along the funis, the placenta was found inserted to the right, and posteriorly, and so firmly attached as to menace the rupture of the chord in its separation. The haemorrhage still continuing, the placenta was at length detached gradually and without much difficulty by the hand. It formed a hard and compact mass, with a kind of fleshy membrane, which presented a hollow at the place of insertion; and a smooth tumour of the volume of a small egg, a little above and posteriorly. On the extraction of the placenta, the haemorrhage instantly ceased; but the hypogastrium still presented the tumour before-mentioned. Meanwhile the patient's respiration grew more and more embarrassed; the pulse

sunk; extreme loss of strength ensued; and death took place after a quarter of an hour's struggle, without any recurrence of the haemorrhage. The infant died in a few minutes after; having survived delivery three quarters of an hour. Permission to inspect the mother's body was refused. The partial success of this remarkable case would certainly justify the attempt at extirpation of the foetus under similar deplorable and otherwise hopeless circumstances of extra-uterine pregnancy."

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*Ergot.*

[To the Editors of the New England Journal of Medicine and Surgery.]

Gentlemen,

**I**T was not without considerable surprise, that I read Dr. Spalding's letter on ergot, published in the last volume of your Journal, containing his opinion of its being an inert substance. Since this article has come into use, I have administered it about a dozen times, with the intention of promoting parturition; and in ten of these trials it has accomplished my purpose, in a short time, and perfectly well.

In my successful use of this medicine, it has not been given till bleeding, and evacuating the intestines, if necessary, had been premised; nor till the os uteri was so fully dilated and yielding, that it no longer prevented the advancement of the foetus. It has been my rule not to give it till nothing indeed was wanting to effect the birth of the child but a vigorous contraction of the uterus and subsidiary organs.

The article has been given in form of decoction, making three ounces of this from one scruple of the ergot, coarsely pulverized.

One common-sized table spoonful of the decoction has been given, every twenty minutes, till the desired effect has been produced. The operation of this dose has usually been sensible in ten or fifteen minutes. In nine cases, the foetus has been expelled in from twenty-five to forty minutes after the first exhibition of the medicine. One table spoonful of the decoction has, with me, twice produced parturition; the second dose has succeeded more frequently, and in one only of the ten cases, have I had occasion to give the whole three ounces of decoction. In the eleventh case, which occurred in October last, the preparation was given before the os uteri was so

fully opened as it had been in the preceding cases ; and by the mistake of an attendant, an ounce of the decoction was given at once. In about eight minutes, the ergot increased the pains to a degree that might well be called violent. There was considerable resistance to be overcome, and the parturient efforts were almost incessant. In thirty minutes from the action of the ergot, the child was born in health, and the mother was safe.

I had great cause to be satisfied with this event, for the pains had been so inordinately severe, and quick in succession, for nearly half an hour before delivery, that I had apprehended a rupture of the uterus might take place. Such was the effect of an ounce of the decoction in this instance, that it will forever prevent my giving it again, in any quantity, in a similar case. In one case only have I found the spurred rye to be inert ; and this sample I found, on inquiry, to have been more than a year old.

A reputable physician informs me, that he has known the ergot to lose its activity from age ; but at what distance of time from its growth this effect is produced, I have not yet been able to ascertain. May not the spurred rye of different seasons and soils vary as much from its general character, as the grain does from which it proceeds ?

However this may be, every thing I have yet witnessed of the effects produced by this substance, convinces me not only that it is active and powerful, while its specific property remains, but that it is eminently so.

I esteem it as a very valuable remedy, capable even of saving life ; or as a most hazardous agent very capable of destroying it, according to the mode of its administration, and the circumstances in which it is given.

How it has happened, that Dr. Spalding should never have obtained any ergot which has not been as inert as coffee, it is somewhat difficult to imagine, unless we suppose that all his specimens of the article had been injured by time.

So far as the doctor's opinions on this subject are likely to have any influence, they will tend either to prevent the use of ergot altogether, as useless ; or they may lead to an incautious and too frequent employment of it, from a doubt of its great power.

The first effect would deprive the well-informed and judicious accoucheur of a most valuable assistant ; and the other error would hurt or destroy many human beings. Fortunately, however, it rarely occurs that the views and sentiments of any

individual, however respectable, can prevail in opposition to the strong current and tenor of general experience and belief.

From your obedient servant,

J. G. COFFIN.

Boston, February 1819.

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*Extraordinary Case of Corneous Excrescence.* By T. V.  
WIESENTHAL, M. D. of the United States Navy.

[To the Editors of the New-England Journal of Medicine and Surgery.]

Gentlemen,

THE following extraordinary account I met with in a common-place book of my late father, Dr. Andrew Wiesenthal; and as it probably has never been published, I take the liberty of forwarding it to you.

T. V. W.

*Case of Charles Gallaher.*

"This man exhibits a singular and very curious anatomical phenomenon. There grows from his breast and arm of the right side, a horny excrescence of uncommon magnitude; the history of which, taken from his own mouth, and from what I have myself had an opportunity of observing, is as follows:—

"He was a sailor on board the Victory, Admiral Vernon, at the attack of Carthagena. During the engagement a quantity of powder which was near him, took fire and burnt the whole of his right side. In due time the wound was healed, except a small spot at the upper part of the injury, which resisted every application made to it, and from which there was a continual discharge of matter for the space of three years. In this situation he was induced to submit himself to the treatment of some woman, who applied something, that excited a sense of burning heat, and gave him intense pain. In about a fortnight, however, it entirely arrested the discharge and healed the sore.

"Within the space of a few months, he felt an itching in the spot from which the discharge had before issued, and shortly after a slight ulceration and discharge again took place. In process of time, he discovered a small, hard point, projecting from the sore spot, which he compares to the incipient tubercle of the horn of a lamb. This progressively elongated and grew broader and thicker, the extremity of it being pointed and turning inward towards the skin, until about two years from this time (January 1796) when the inconvenience arising from it

rendered it necessary to have it cut off. This operation was performed by a carpenter. The piece at this time taken away was about five inches in length, and of its present breadth, according to the man's account.

" During the time between its first appearance and its amputation, the part itself, and those immediately connected with it, were perfectly free from pain and ulceration.

" After the operation it soon perceptibly increased in length, and arrived at a considerable size, when, going to Philadelphia, he engaged the attention of Charles W. Peale, Esq. who again amputated the excrescence about the month of September, 1795. The weight of the piece taken away, will afford an idea of the size; it weighed four ounces. In five or six weeks after it had again acquired such increase as to demand a repetition of the operation, which was accordingly performed by Mr. Peale a second time, and this piece weighed two ounces and seventeen penny-weights.\*

" Thus much I have from the man himself. I shall next remark such circumstances, as have occurred to my observation. Upon examining this excrescence I found that one extremity of it arises at about the distance of two inches from the sternum, and about the middle of the external pectoral muscle. From this it rises by an unequal ascent, to the lower edge of the deltoid muscle, just above the axilla; from whence it descends, and terminates near the insertion of the deltoid muscle; so that it firmly connects the arm to the trunk of the body, and confines its motions to a very limited space.

" On the 23d of December 1795, the excrescence having again acquired such a size as to become very troublesome to him, he applied to me to take it off, which I accordingly did. The piece weighed exactly fifteen drachms. The outside of it was of a horny hardness, but within it was considerably softer, and may be compared to horn softened by boiling. After removing the portion which I took off, I perceived in the centre of the basis, which was left adherent to the skin, a small quantity of purulent matter that had an unpleasant smell, and some of the lower edge ulcerated.

" The upper surface of this substance has a fibrous appearance, and is smooth; but its lower surface is rough and broken. In colour it exactly resembles horn, though below it is discoloured, probably by a matter that issues from the under part.

" The measurements are these:—Its breadth is exactly three

\* These two pieces, together with the portrait of the man, are preserved in Mr. Peale's museum, in Philadelphia.

inches and three-eights. Its greatest thickness at its origin in the skin about one inch, though its thickness generally varies from that to half an inch. Its length at the time it was entire, was two inches."

## REMARKS.

It is often difficult to resist the strong propensity of the mind to search into the obscure doctrine of causes, although a want of the necessary premises renders it a hopeless undertaking, even in the most ordinary occurrences. But when an unusual and striking phenomenon occurs, the mind endeavours to surmount all obstacles; and what reason fails in, is supplied by the imagination. After all our boasted knowledge of the composition of the animal body, after all our cunning in the science of physiology, so far exceeding the attainments of prior ages, we still are distant from a perfect knowledge of the latent operations of the animal œconomy.

We would willingly account for the production of this excrescence; but let us first explain the operation by which a hair is formed. It may be said, that this is not difficult; that it is produced from a matter secreted by certain vessels properly disposed for the purpose—true; but we have still the greatest difficulty to surmount. Who will explain the law which determines these vessels to deposite such a matter and no other? Who will develope the mode by which the constituent principles of a hair are brought into union? Many reasons may be given; but after all they are nothing more than hypothesis and wild conjecture. We must humbly content ourselves with a knowledge of facts; and all that we can with certainty or safety affirm is, that the horn thus preternaturally formed, is produced by an altered and vitiated action of the *vasa minima* of the skin; and the only certain inference we can deduce from the fact is, that secreting vessels are capable, under certain circumstances, of changing their action and assuming a mode for which they were not by nature intended.

To what extent and in what respects this fact may be applied to practical utility, I will not presume to say. It is acknowledged, that the proper treatment of ulcers, and many cases of vitiated secretion, depends upon a knowledge of this principle of the animal œconomy, that the nature of the fluids secreted depends upon the state of the vessels that form them.

*Extract of a Letter to one of the Editors.*

[Communicated for the New-England Journal of Medicine and Surgery.]

Dear Sir,

I AM desirous of communicating, through the medium of the New-England Journal, a new mode of operating for cataract, which has been projected and practised recently, in two cases, with the most satisfactory success, by my friend Dr. Gibson, Professor of Surgery in the University of Maryland.

The operation was performed in the following manner:—The iris was in the first place dilated by the application of the atropa belladonna. A common sewing needle, slightly curved and armed with a single thread of silk, was then passed through the tunica sclerotica, about two lines from the cornea, where the couching needle is usually introduced, through the opaque lens and out of the opposite side of the cornea, at a point corresponding to the one at which it was introduced. The silk being drawn through, and the ends cut off, a single thread was thus left passing through the ball of the eye, and acting on the diseased lens in the manner of a seton. It was feared that serious inconvenience might arise from the irritation produced upon the tunica conjunctiva, from the excessive sensibility of this membrane. Fortunately, however, neither this nor any other accident intervened, and at the end of ten days, in both cases, the diseased lens had disappeared, and, in its place, the silk was distinctly seen passing like a bar across the pupil of the eye. The silk was withdrawn, and in a few days the vision was restored. In the third and last case in which this operation was performed, it failed in consequence of the iris being wounded. This caused such an inflammation of the organ, that it was deemed proper to withdraw the seton at a very early period. This accident was attributed to not using the belladonna.

One would think that a common sewing needle is not the most convenient instrument that could be devised for this purpose, on account of the dense structure of the part through which it is to pass, and the difficulty of having the perfect command of any instrument without a handle. From the nature of the disease, from the known effects of this remedy when applied to other parts of the body, and from the success which has already been experienced, there seems to be good reason to hope, that this will be found an important improvement on the established practice in many forms, if not in every

variety of this disease. But the practical benefit to be derived from this operation can only be tested by a more enlarged observation than in this country, ever falls to the lot of any individual.

I remain yours, &c.

J. REVERE.

Baltimore, March 2d, 1819.

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*Observations on Chronic Inflammation of the Brain and its Membranes.* By JOHN ABERCROMBIE, M. D. Fellow of the Royal College of Surgeons of Edinburgh.

[Concluded from page 71.]

## II.—*Suppuration of the Brain.*

FOUR varieties occur in the form of suppuration, and they appear to differ considerably in their symptoms. (1.) An extensive portion of the brain, often the greater part of one hemisphere, broken down into a soft mass, in which purulent matter is mixed with soft corrupted cerebral substance, perhaps with some pure pus in the centre. (2.) A distinct abscess confined within a soft cyst, the surrounding cerebral substance being healthy. (3.) Purulent matter on the surface, either betwixt the membranes, or under the pia mater, or both. (4.) Superficial ulceration of the surface of the brain.

1. The first form seems to constitute the *sphacelismus cerebri* of systematic writers, and is exemplified in cases 8th and 9th. The symptoms do not differ materially from those of hydrocephalus, except that there is less coma. This was very remarkable in case 9th, in which the patient was, with the exception of a great degree of deafness, in possession of every faculty a very few minutes before death. After the first, or active stage, is over, the patient generally lies in a state of great oppression, often with incoherent talking, but out of which he can be roused, so as to answer questions distinctly. In both the cases that I have described, shivering occurred at an early period. In one of them there was double vision for one day, which then disappeared, and vision continued natural to the last; in the other there was blindness on the last day. I have not observed either convulsion or paralysis in this form of the disease, except in the remarkable case (case 10th) in which it was complicated with extravasation of blood.

**2. THE ENCYSTED ABSCESS.**—In this case, the matter is contained in a defined cavity, which is generally lined by a soft white sac, formed, probably, by effused coagulable lymph. The cerebral substance in the vicinity is little injured. In cases of this kind convulsive and paralytic affections are more apt to occur than in the former. The course of symptoms in case 7th was very remarkable. The sudden attack of convolution, followed by paralysis of one arm, probably occurred in the inflammatory stage, for, when the symptoms were relieved by the bleeding and other remedies, the arm recovered its motion; the convolution returned, and the paralysis along with it, and, after several attacks of the same kind, the paralysis became permanent. The thigh and leg then went through the same course. Circumstances will be afterwards mentioned which render it probable, that, in cases of this kind, convulsions occur while the inflammatory state is going on, and that the period of suppuration is indicated by the permanent paralysis. In this case three abscesses were met with, but whether the successive formation of these had any relation to the successive attacks of the disease in the arm and leg, must be matter of conjecture. In a similar case, related by Bartholinus, the leg was first affected, and afterwards the arm. One abscess only is mentioned, of which it is merely stated, that it was on the opposite side. In a case related by Schenkius, there occurred paralysis of the left side and convolution of the right; there was a superficial abscess on the right side of the brain, and the membranes covering that part were very dark coloured, and much loaded with blood. Something similar to this occurred in case 18th, in which there was paralysis of the left side, with convulsive agitation of the right arm. In a girl, aged five, whose case is described by Dr. Bateman,\* an abscess, containing four ounces of pus, inclosed in a firm vascular sac, was found in the posterior part of the right hemisphere. She was first affected with convolution of the whole body, which continued nearly two days. During this time the left side was in a state of rigid contraction, and the right was in constant motion. When the attack subsided, the left side remained paralytic. She then had headache, squinting, blindness, and repeated convolution, and died after an illness of eleven weeks, having been comatose only for one day before her death. In some cases of this kind, paralysis has occurred without convolution, and in others convolution without paralysis; but some affection of one or other kind has occurred in nearly all the cases of encysted

\* Edinburgh Medical Journal, Vol. I. p. 150.

abscess that are on record. In a case described by Morgagni, the prominent symptoms were pain of the left side of the head, delirium, loss of speech, and weakness of the muscles of the left side of the neck. The man died in fourteen days, gradually exhausted, and an abscess was found in the right corpus striatum, which had burst into the ventricle. In a case mentioned by Valsalva, in which the disease was in the corpus striatum, the speech was much affected, and one side was paralytic. In another, there was indistinctness of speech, and paralysis of the right side, connected with an ulcerated cavity in the base of the brain, on the left side. In a third case, by the same writer, there was paralysis of the right side, and convulsion of the left, with an ulcerated cavity in the substance of the brain, under the choroid plexus of the left side. From these observations, it appears that convulsion is apt to occur on the same side with the disease in the brain, and paralysis on the opposite side, and that convulsion may occur in either, or in both. In a few cases, abscess has been found in the brain without any symptoms that had indicated its existence. Morgagni found one in the posterior part of the brain, in a man who died of gangrene of the nates, without any symptom in the head. A man mentioned by Dr. Powel,\* was received into Bartholomew's Hospital on account of cough, dyspnoea, and bloody expectoration. He died after being a month in the hospital, having been for some time before death in a dosing state, with occasional delirium, but without coma, and he had never complained of his head. His lungs were much diseased, and an abscess, the size of a large walnut, was found in the substance of the brain, under the anterior part of the corpus callosum.

These observations apply chiefly to the more acute form of the disease, in which it approaches to the nature of active inflammation of a part of the brain, terminating, in a short time, by the encysted abscess. But it occurs in a more chronic form, producing its symptoms for a much longer time, often for several months, and then proving fatal, generally by suppuration, but sometimes without having suppurred. When the disease, in these cases, proves fatal without suppuration, a part of the brain is found changed in its structure, generally of a reddish colour, and in consistence resembling a steatomatous tumour. The portion so changed is usually small and circumscribed, and it is sometimes surrounded by a sac, which is soft, and of recent formation. This appearance has been called a

\* Medical Trans. of the College of Physicians of London, Vol. V.  
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tumour in the brain. I believe that it is merely a part of the brain in the state of scrofulous inflammation; that, in its early stage, it is a disease which may be cured; and that the formation of a sac of coagulable lymph around it, is the first point in its progress which gives it the character of organic, or hopeless disease. In this state it may be fatal, or, being drawn out to a greater length, it may go on to partial or complete suppuration. This affection, in its first stage, was observed by Burserius\* in the anterior part of the right hemisphere, in a man who died after an illness of four months; he had been affected with constant pain of the head, near the vertex, fever, paralysis of the left side, and convulsive affections, which occurred at intervals; his lungs also were ulcerated. Fantonus† found a similar disease in the corpus callosum in a man who had been long affected with intense pain in the crown of the head, with epileptic paroxysms, and at last died comatose and convulsed. This man was affected with inordinate hunger, and an acrid state of the saliva. In the state of suppuration, Burserius found one the size of a pigeon's egg, in the outer part of the right hemisphere, under the squamous suture, in a man who had been affected, for several months, with intense headache, and convulsive tremors of the whole body, which were most severe in the left side. He found another in the posterior part of the brain, near the tentorium, in a woman, who had been ill, for several months, with severe headache, without fever: the pain was so intense as almost entirely to deprive her of sleep, and she seems to have been gradually worn out by the severity of it, without any other remarkable symptom.

This form of chronic inflammation of a small part of the brain is a disease of much importance. The symptoms may go on for several months, so as to assume the characters of organic disease; they may remit so as to resemble periodical headache; the disease may then be fatal, often unexpectedly; or after it has appeared to resist all our remedies, it may gradually subside. This agrees exactly with the course of chronic inflammation, which we observe in external parts; we see it in the eye, in the lymphatic glands, in the mamma, in the testicle, and in the cellular membrane. It takes place rapidly, producing enlargement of the parts, and derangement of their functions; it may continue stationary for a considerable time; it may then terminate in unhealthy suppuration and ulceration, or in permanent induration of the part; or, after resisting for a

\* Burserii, Institut. Med. Pract. Vol. III.

† Fantoni, Epist. de Observat. Med. et Anat. Epist. V.

long time all our remedies, it may gradually subside, without leaving any permanent injury in the organization of the part. I think we have good reason to believe, that something similar to this takes place in the brain, and, if this doctrine be admitted, the practical importance of it will be, that we shall be less disposed than we usually are to consider such cases as depending upon organic disease, and, consequently, not the objects of active practice. The two following cases so much resembled one another in the leading symptoms, that I think it fair and reasonable to consider them as examples of the same disease.

A gentleman, mentioned by Dr. Powel, was affected with severe headach, which occurred in paroxysms: during the paroxysms, which often continued for several hours, he had double vision, impatience of light, and at one time muscular twitches, and numbness of the left side. The pulse was variable, sometimes a little frequent, sometimes rather below the natural standard. After large and repeated blood-letting, purging, blistering, &c. he was much relieved, but after a short interval of relief, the complaint returned with great violence, and required a repetition of the same remedies. After several aggravations and remissions of this kind, he had at the end of three weeks an interval of ease for more than a fortnight. The pain then returned with violence, and was accompanied by spasmotic affections of the muscles of the neck. He then derived temporary relief from narcotics, and, soon after this, the complaint assumed so much of a periodical character, that it was treated by cinchona: the pulse at this time was natural. Under this treatment, the paroxysms became rather less severe, but not less frequent, and they were attended occasionally by convulsive motions, which chiefly affected the right side. The paroxysms were very uncertain in their recurrence; sometimes they consisted of pain only, and sometimes accompanied by those convulsive motions. He died suddenly in a convulsive attack, two months after the commencement of the complaint: for some time he had been considered as better, and sat up for two hours on that day, in the night of which he died. The anterior part of the right hemisphere was found changed in its structure, and rather indurated, and the surrounding medullary substance was softened. When the dura mater was first removed, the part where the disease was situated appeared to rise higher than the neighbouring parts. There was a table spoonful of fluid in the ventricles; the other parts were sound.

A young lady, aged twenty-two, was taken ill on the 20th of February 1817, and, for the first week, her complaint had the

appearance of continued fever. In the second week, the pulse came down, and the tongue became clean and moist, while the headache continued severe, with a sense of weight, much throbbing in the head, a look of great oppression, and occasional vomiting. Blood-letting, purgatives, blistering, and the application of cold, afforded partial relief; but, on the 5th of March, the pain returned with great severity, accompanied by violent throbbing, and a degree of squinting. The same remedies again procured an interval of partial relief: The pain was not removed, but it was less severe than in the violent paroxysms; there was constant throbbing in the head, and a look of much oppression; the pulse was generally from 84 to 90. On the 11th, there was a violent paroxysm, followed by convulsion. She was again relieved by bleeding; but, on the 15th, she had loss of recollection, much confusion of thought, difficulty of articulation, and numbness of the right arm, and right side of the face: this was greatest in the face, which had no feeling when it was touched. These symptoms disappeared on the following day. The pain continued to recur in paroxysms, and, about the 24th, had assumed so much of a periodical character, that, by the advice of an eminent physician, it was treated by arsenic. This remedy having occasioned nausea, was given up after a week. She then continued for a fortnight or more, in nearly the same state, constantly confined to bed, and affected with frequent returns of the pain, but without any violent attack, until the 20th of April, when it returned with great violence, accompanied by vomiting, pain in the abdomen, and double vision during the paroxysm; the pulse at this time was natural. The same remedies again afforded relief. From the beginning of May, the complaint began to diminish in violence. On the 20th, she was for the first time able to be out of bed; and from that time recovered gradually. Soon after her recovery, a large glandular swelling appeared upon her neck, which has continued stationary through the winter. She is still liable to headach, and throbbing in the head, and requires great care, and the most cautious regimen.

These two cases I am disposed to consider as examples of chronic inflammation of the brain, under that form in which its progress is most slow; in the one, terminating by fatal induration of a part of the brain; in the other by recovery, after an illness of three months. Upon the whole, I think we have ground for forming the following conjectures on this most important subject. 1. That chronic inflammation of the brain exists in various degrees of activity. 2. That in one form, probably the most active, it advances speedily to suppuration.

3. That in another form, probably the least active, its progress is slow ; that it leads to certain changes in the structure of the part affected ; that, at a certain stage in its progress, there is often formed round it a sac of coagulable lymph ; and that the disorder then assumes the character of organic, or hopeless disease ; that it may then go on to suppuration, forming an encysted abscess, or that it may be fatal without the formation of this cyst, and without suppuration. 4. That the disease may exist a long time in its first stage, producing urgent symptoms, but without advancing beyond that stage in which there is a chance of recovery. 5. That, though the complaint may not be much under the power of our remedies, it is not on that account to be considered as not being the subject of practice, but that vigorous treatment, by restraining its action, may perhaps prevent it from passing into organic disease, and afford at least the chance of gradual recovery.

In the encysted abscess of the cerebellum, convulsions and paralysis are rare : a very slight convulsive affection occurred once in case 12th. In case 11th, the most remarkable symptom was the loss of the power of swallowing. Many cases of abscess of the cerebellum are on record : I do not find that either convulsion or paralysis occurred in any of them, except in one case by Plancus, in which there was paralysis of one side, and it was in the same side with the disease.\* In case 12th, though the disease was in the cerebellum, the principal seat of the pain was in the forehead, and this has been observed in other cases of the same kind.

Inflammation of the cerebellum, like that of the brain, may also exist in a less active form, in which its progress is very slow. The symptoms in these cases are much less marked than those attending similar disease in the brain ; and it appears, that it may even go on to suppuration without producing any very urgent symptom. A man, mentioned by Dr. Douglas, had been for three months affected with pain in the forehead, which generally obliged him to sit with his head leaning forward ; he had bad appetite, and disturbed sleep, but no other symptom. He died suddenly in an attack resembling syncope, having been for a day much better, with good appetite, and quiet sleep. An encysted abscess was found in the middle of the cerebellum, and a rupture of the left lateral sinus, which probably was the immediate cause of death.†

\* Plancus, Storia Medica d'una Postema del lobo destro del cervelletto.

† Edinburgh Medical Essays and Observations, Vol. VI.

3. SUPPURATION ON THE SURFACE OF THE BRAIN may take place under the dura mater, or under the pia mater, or in both these situations. In these cases, it is probable that the matter is formed by inflammation of the membranes, for I think there is no doubt, that, in a certain state of inflammation, serous membranes are capable of forming pus. It is not, indeed, an uniform purulent matter like that which is formed in a healthy abscess, but a mixed matter, composed of yellow flocculi of coagulable lymph, combined with a thin puriform fluid. This is the appearance of the matter which is usually met with under the dura mater. The symptoms accompanying this affection vary considerably in different cases. There is pain corresponding to the part affected, sometimes with convulsive motions, and often ending in coma, but sometimes the patient dies suddenly without coma. In case 16th, a superficial suppuration of this kind elevated the fontanelle into a tumour, which was opened without relief, the greater part of the matter being of that thick flocculent kind that could not be evacuated.

A frequent and insidious form of this affection begins with pain in the ear, and may be for some time considered merely as an affection of that organ. Sometimes discharge of matter takes place from the ear, which occurrence is considered as confirming this opinion of the seat of the disease. The suppuration is expected to relieve the pain, but the pain continues, perhaps becomes more violent. The patient is oppressed and drowsy, then slightly delirious, and at last comatose. In other cases there is no discharge of matter; the patient, after complaining for a short time, perhaps one day, of deep-seated pain in the ear, becomes restless and forgetful; lies rolling his head from side to side, or tossing about his arms, and in a short time sinks into coma. The pulse is in some cases frequent, in others natural, and in others below the natural standard, especially after the appearance of coma. The nature of these cases is illustrated by dissection. There is generally caries of the pars petrosa where it forms the ear, sometimes confined to a small spot of it; a portion of the dura mater corresponding to this part is thickened, spongy, or ulcerated, and generally detached from the bone; between this and the brain, there is either a collection of matter, or a deposition of coagulable lymph. Sometimes there is at that part a superficial abscess in the substance of the brain, and, in some cases, there are marks of more extensive disease, with effusion in the ventricles. In a boy, whose case is related by Mr. Brodie, there was, in the left hemisphere of the brain, a cyst about three inches in diameter, of a pulpy consistence, thick and vascular, and con-

taining a thick dark coloured pus. The lower part of the cyst rested upon the petrous portion of the temporal bone. There was a small opening through the cyst, dura mater, and bone, forming a communication between the cavity of the cyst and the meatus auditorius externus.\*

This affection appears, in many cases, really to begin in the deep-seated parts of the ear; thence the inflammatory action spreads to the pars petrosa, speedily followed by caries, then to the dura mater, and at last to the brain. It occurs most frequently in persons who have shewn a tendency to disease in those parts, as in those who have been liable to suppuration of the ear, or to deep-seated suppuration behind the ear. A very unmanageable abscess is often met with in this situation, from which a probe can be passed to a great depth into the cells of the mastoid process. It is generally a scrofulous affection, extremely tedious in its progress, and sometimes terminates in the manner just alluded to, by inflammation spreading to the dura mater and inducing coma.

The matter which is formed in those cases, whether in the substance of the brain or betwixt the membranes, sometimes finds a vent by the ear, the dura mater being ulcerated, and the bone perforated by the caries. In this way very alarming symptoms are sometimes unexpectedly relieved. A young lady in Edinburgh had lain for three or four days in a state of perfect coma, and was considered as being in a hopeless condition; her medical attendants, paying their visits regularly as a matter of form, were surprised to find her one day sitting up and free from complaint. A copious discharge of matter had taken place from the ear, with complete relief, and she continued well. In other cases of this kind, the relief is but temporary; the patient continues liable to frequent attacks of headache, followed by discharges from the ear, and at last dies comatose. In some of these cases there is good ground for believing, that a communication had existed for a considerable time, perhaps for weeks or months, betwixt the ear, and a diseased surface within the cranium, and that the discharge which was thus afforded to the matter from time to time, had retarded the fatal event. Many cases are on record which render it certain, that, when there is an outlet for the matter, repeated suppurations may take place in this manner in the substance of the brain or on its surface, and the disease go on for a considerable time before it is fatal; and some of them have even at

\* Transactions of a Society for the Improvement of Medical and Surgical Knowledge, Vol. III.

last terminated favourably. They are, however, generally fatal; in some the fatal event is sudden, like an apoplectic attack; in others there is a gradual abolition of the faculties, with constant complaint of the head, often accompanied by paralytic symptoms, or remarkable tremors of particular limbs, or with general convulsions.

It remains to be mentioned, that this form of the disease may run its course without inducing coma, and unaccompanied by any symptom that distinctly points out the highly dangerous disease which is going on within. A young man, aged 16, whose case is related by Dr. Powel,\* had been liable to suppuration of the ear and deafness. He was seized with a deep-seated pain in the right ear, without fever; some discharge of matter took place from it without relief. Temporary relief was obtained from opiates, but the pain always recurred with increasing severity. The discharge became fetid, but the pulse continued natural, and no other function was affected. On the 7th day of the disease, after a paroxysm of pain more violent than any of the preceding, he sunk rapidly and died. On dissection, part of the pars petrosa was found carious, black, and crumbling, and contained in its substance fetid pus. The dura mater corresponding to it was black, sloughy, and separated from the bone. Under the dura mater there was a collection of purulent matter and coagulable lymph, amounting to several ounces. It covered a great part of the surface of the right hemisphere, and a considerable quantity of it lay betwixt the posterior lobe and the tentorium.

Mr. Parkinson† mentions a boy of 14, who had been affected for two months with headache and discharge of matter from the right ear. A week before his death the pain increased, and was accompanied with great debility and exhaustion, giddiness, and some vomiting. He continued in this state, without stupor or any other remarkable symptom, until the day on which he died, when he was suddenly seized with convulsion, and died comatose. An abscess was found in the middle lobe of the right hemisphere of the brain, and another in the cerebellum. There was extensive caries of the pars petrosa of the temporal bone, and effusion in the ventricles to the extent of three ounces.

Persons who have been long subject to suppuration of the ears are particularly liable to this disease. In many cases there is no immediate connexion betwixt the disease in the ear and

\* *Transactions of the College of Physicians of London, Vol. V.*

† *London Medical Repository for March 1817.*

the internal disease, except that the former marks the tendency to chronic inflammation. In these cases the bone is not affected, and the internal disease may be seated in the cerebellum, or on the opposite side of the brain. I have, in a former paper, described a remarkable case, which began with suppuration of the ear, and terminated by suppuration of the spinal cord. In some cases, again, the attack of internal disease is preceded by a sudden cessation of the discharge from the ear. In such cases it is probable that the cessation of the discharge is not to be considered as the cause of the internal disease, as has sometimes been imagined, but as an effect of the inflammatory action changing its seat.

A similar disease is sometimes met with in the nose. A person who has been liable to pain in the forehead and discharge of matter from the nose, frequently accompanied by exfoliations of small pieces of bone, becomes at last forgetful and delirious, and dies comatose. The ethmoid bone is found carious, the dura mater corresponding to it is diseased, and there is a collection of pus between it and the brain; sometimes suppuration of the brain itself. Several cases of this kind are related by Lieutaud and Bonetus. Morgagni mentions a priest who, after being affected with fever, delirium, pain of the forehead, and convulsion, fell into coma, from which he was relieved on the 21st day of the disease, by a discharge of purulent matter from the nose. A case exactly similar, in a girl of 14, is related by Mangetus. We are not, however, warranted to conclude, that, in these cases, the discharge was from the cavity of the cranium; as violent symptoms, such as those now mentioned, have often been known to accompany suppuration in the frontal sinus.

Caries of the bone, connected with internal suppuration, may take place, in the same manner, in any part of the cranium without external injury. Some years ago, a remarkable case of this kind occurred in Edinburgh, in a middle aged man, who, after a short illness, died in a state of coma. In opening his head a collection of matter was found under the temporal muscle, which communicated through a carious perforation of the temporal bone, with an abscess in the substance of the brain. Burserius mentions a woman who, after suffering for a fortnight severe pain in the left side of the head, was seized with swelling and inflammation of the left eye-lids, eye-brow, and cheek; after several days this swelling suppurated and discharged much matter, and the left eye was found to be blind. After some days she was seized with convulsion, followed by coma, and death. On dissection, the external suppuration was found

to have penetrated to the bottom of the orbit, betwixt the bone and the ball of the eye, without injuring the ball itself. There was extensive suppuration of the anterior part of the left hemisphere of the brain, which communicated freely with the cavity of the orbit.

The practical inference from these facts is, that deep-seated pain in the ear is to be regarded as an affection which should be watched with attention. If accompanied with fever and pain extending over the side of the head, it should be treated with activity; if there occur forgetfulness or delirium, the danger is urgent; if it pass into coma, it is probably hopeless. The same observation applies to ulcers on any part of the cranium which lead to denuded or carious bone, or from which a probe can be passed into the cellular structure about the base of the cranium. In some cases of this kind, the trephine has been applied with success; and they have shewn us what extent of disease within the cranium may be recovered from when a free outlet is procured for the matter. Morand\* relates the case of a monk who had been for some time affected with discharge of matter from the right ear, and violent pain of the ear, extending over the right side of the head. A tumour formed behind the ear, extending upwards towards the temple, which, being opened, was found to be an abscess, and a probe could be passed from it through a carious opening in the cranium. The trephine was applied to that place, and discovered a suppurating cavity within the cranium, which discharged at each dressing a tea-cupful of matter. The discharge diminished gradually, and the sore was healed in two months. The man continued well four years after, when his case was laid before the French Academy.

**4. SUPERFICIAL ULCERATION OF THE BRAIN.**—When the disease affects the surface of the brain, the symptoms are, in some respects, different from those which occur in the other forms of the disease. A variety of singular spasmoidic affections are among the most remarkable symptoms. In some cases they resemble chorea, but generally terminate in paralysis. A man, mentioned by Dr. Powel,† was affected with a convulsive motion of the left side of his body, which very much resembled chorea; he was free from it during sleep, and had no other complaint. This affection continued six weeks, and then suddenly terminated in paralysis of the affected side.

\* Morand, *Opuscules de Chirurgie*.

† *Transactions of the College of Physicians of London*, Vol. V.

Soon after this his right hand and arm became convulsed, but in a slighter degree ; he then became gradually comatose, and died two months after the commencement of the complaint. On the anterior part of the right hemisphere of the brain, there was a superficial loss of substance from ulceration, two inches in length and about an inch in breadth. It presented an irregular excavated appearance, and a thin layer of curdled matter was deposited in it. There was a similar disease, but much less extensive, on the anterior part of the left hemisphere. There was much fluid in the ventricles. A lady, mentioned by Dr. Thomas Anderson,\* had been for several years liable to pain in the head, which was most violent at a particular spot near the centre of the vertex. After she had suffered for a considerable time from this pain, she was seized with a convulsive affection of the left arm and leg. It occurred in paroxysms, attacked her several times every day, and generally continued about half an hour at each time. This complaint became gradually more and more severe ; the right side became slightly affected in the same manner, and she afterwards became liable to attacks of coma, in which she often lay for 24 hours at a time. She died at last of gradual exhaustion. On the upper part of the right hemisphere of the brain there was a superficial loss of substance from ulceration, two and a half inches long, one and a half broad, and about half an inch in depth. In the bottom of it there were found some thin laminæ of firm brownish matter, which crumbled into sand when they were rubbed between the fingers.

In cases of this kind, there is reason to believe that the ulceration takes place but a short time before death. The original disease appears to be chronic inflammation, which may either pass into ulceration in a short time, or may induce induration of the part. This induration may then continue for a long time, inducing urgent symptoms, and is often, at last, fatal by suppuration, or may be fatal without suppurating. This state of disease has accordingly been observed in various stages of its progress. A man, mentioned by Dr. Anderson, received a violent blow on the back of his head, from the boom of a ship, which fell upon him as he was stooping under it. After some time he had pain in the part, which became gradually more severe, and, after eighteen months, brought on convulsive paroxysms of both upper and lower extremities, the violence of which put an end to his life, after he had suffered from them for several months. Both hemispheres of the brain, on the posterior part,

\* *Transactions of the Royal Society of Edinburgh*, Vol. II.

were found inflamed, and much hardened. The diseased parts adhered closely to the dura mater, and to the falx; the dura mater, at that part, was also thickened and indurated. A man, aged 45, mentioned by the same writer, had been for several years liable to convulsive paroxysms, resembling epilepsy, but with this peculiarity, that the convulsion was confined to the right arm and leg. The attacks occurred at irregular periods, generally once in three or four weeks, and were succeeded by stupor, which continued about half an hour. Without any change in the complaint, he died suddenly, from an injury of the head. A portion of the upper part of the left hemisphere of the brain was found indurated, and closely adhering to the dura mater, which was at that place much thickened and hardened. Extravasated blood was found in another part of the head, which appeared to have been the effect of the injury, and the immediate cause of death. In a man, aged 35, who had suffered, for several years, from violent pain in the forehead, with epileptic paroxysms, Morgagni found the anterior part of the right hemisphere of the brain indurated, and adhering to the dura mater. Baaderus relates the case of a man, aged 40, who became suddenly epileptic, with pain at a particular spot on the left side of his head. There was an exquisite sensibility of the surface of the left hand and arm, so that the slightest breath of cold air upon them brought on convulsive twitches. After an illness of five years, he died rather suddenly. At the part which had been the seat of the pain, there was a superficial induration of a portion of the brain, and under the indurated part there was an abscess the size of an egg.

The effect of superficial inflammation of the brain, and its membranes, is illustrated by a case related by Dr. Anderson, where the disease took place under his eye. A boy suffered, from an injury of the head, the depression of a considerable portion of the right parietal bone, the depressed portion being forced through the dura mater, and driven inwards upon the brain. He had paralysis of the left side, and the left eye was insensible. The depressed portion being removed, the paralysis was greatly diminished, and the eye recovered a considerable degree of vision. On the third day after the operation, the wound in the dura mater was inflamed, with considerable tumefaction, and immediately the left leg and arm became convulsed, the convulsion being followed by paralysis. The left eye also became again insensible. He had frequent convulsion of those parts, the right side not being in the least affected, for several days, when, suppuration having taken place, all the

symptoms subsided. Had this disease taken place, without such an outlet as was in this case afforded to the matter, the suppuration, instead of relieving the symptoms, would probably have induced permanent paralysis and fatal coma. A man, mentioned by Mr. John Bell, suffered, from an injury of the head, extensive extravasation of blood on the surface of the brain, which was removed by repeated applications of the trephine. During the cure, which occupied three months, the left side of his brain suppurated five or six times. The attack of inflammation was always accompanied by fever, stupor, and difficult deglutition : These symptoms were removed by the suppuration. These attacks occurred at various parts of the brain. When they were towards the anterior part, he had double vision, which also was removed by the suppuration. When they were towards the posterior part, there was no double vision, but a state of vision in which a candle was seen with a halo round it.

Inflammation affecting the surface of the brain, may either be of that chronic kind, which, after some time, induces induration or superficial ulceration, or it may occur under a more active form, which is speedily fatal. An example of this, in which the disease was fatal in the inflammatory stage, occurs in case 1. An example of it in a more advanced stage is related by Burserius. A girl, aged 16, was affected with acute headache, fever, and vomiting ; then became convulsed and comatose, and died on the sixth day. On the upper part of the brain, the cortical substance was corrupted and putrid, and of a leaden colour, without suppuration. There was no effusion in the ventricles, and the other parts of the brain were healthy.

### III.—*Disease of the Membranes.*

CASES 13, 14, and 15, seem to be examples of extensive inflammation of the pia mater, the pseudo-membranous deposition being evidently the exudation from an inflamed surface. They were all characterized by severe convulsions, terminating in coma, in one preceded by a sudden attack of headache, in another by vomiting. Case 13 is remarkable, from the long and deceitful interval of apparent recovery, which preceded the fatal attack. Case 15, in which there was purulent matter in the ventricles, seems to have been fatal by the convulsion, without continued coma. In cases 13 and 14, there was deep and continued coma, though in the former there was no effusion in the ventricles, and in the latter but a small quantity.

The convulsive affections which attack children, and which are apt to be indiscriminately ascribed to dentition, are, I think, in some cases connected with inflammation of the pia mater. In such cases, instead of the membranous deposition which occurred in these examples, we sometimes observe a thin but extensive coating of a puriform fluid on the surface of the pia mater.

The appearance described in the above cases seems to be rather uncommon. I have only found one example of it in Morgagni. It occurred after an injury of the head, and he describes it as a pseudo-membrane, resembling that which is found upon the pleura after pneumonia. Several cases are described by Fantonus, Willis, Haller, and Bonetus, in which the most remarkable appearance was inflammation of the pia mater, but without exudation. In a case by Haller, it was of a dark red colour, (*colore atro-rubro*) ; and in one by Fantonus, "*meninges et præsertim pia, tumentes observantur, cum omnibus inflammationis signis.*" The symptoms in these cases were nearly uniform, headache, fever, delirium, watchfulness, and convulsive affections ; and some of them present a nearer resemblance to the phrenitis of systematic writers than I have observed in any other disease that has occurred to me, in the course of this inquiry. In a case of tetanus described by Le-cat, the most remarkable appearance was an evident inflammation of the pia mater, with some appearance of suppuration.

These cases of extensive inflammation of the pia mater were all speedily fatal. But it appears that both membranes are liable to inflammation, more chronic in its character, and more limited in its extent, which may go on for a considerable time, and terminates by thickening of them at particular parts, and agglutination of the membranes to each other. Many cases of this kind are related by Wepfer,\* Willis, and others. Wepfer mentions a young man who had long suffered from intense headache, and in whom the dura mater was found very rough, and united to the pia mater by strong intermediate fibres. Willis† observed, in several similar cases, such thickening and adhesion of the membranes near the longitudinal sinus, as appeared to him to impede the transmission of the blood into the sinus. In a singular case of fatal convulsion mentioned by Mr. Howship, the only remarkable appearances were a firm adhesion of the membranes to each other, and to the surface of the brain on the anterior part of the right hemisphere, and a slight projection inwards of a small piece of the frontal bone, corresponding to this spot. The fatal attack, in this case, continued

\* Wepfer, *Historia Apoplecticorum.*

† Willis, *Pathologia Cerebri.*

a fortnight, and consisted of frequent convulsive attacks, with loss of recollection. The convulsion was first confined to the left side of the body, and induced, at an early period of the disease, permanent paralysis of the left arm, and soon after of the left thigh and leg. In the subsequent attacks, the right side was convulsed, the left remaining motionless. The muscles of respiration were also much affected; he died suddenly in one of the fits. At a former period this patient had been affected with violent headache, and several convulsive attacks, and, some years before his death, he had suffered an injury of the forehead by a fall from a horse. A gentleman, aged 29, mentioned by Dr. Powel, after being affected for a fortnight with slight headache, became incoherent, with a considerable degree of stupor, dilated pupils, and indistinct articulation, and died in another fortnight. The pupil of the right eye was more dilated than that of the left, and a short time before death, his right side became paralytic. On dissection, effusion was found in the ventricles, and deposition of coagulable lymph about the pons Varolii. At the interior part of the middle lobe of the brain, (he does not say on which hemisphere,) the pia mater was much thickened, and, on its inner surface, studded with small tubercles like large pin heads. Similar tubercles were found on other parts of it, especially where it lies between the convolutions. A man is mentioned by the same writer who had been two years insane, and died fatuous. He had been liable, at uncertain intervals, to convulsive attacks, in which the left side of his body suffered more than the right. An adventitious membrane, of the thickness of three sheets of writing paper, was found covering the whole right hemisphere of the brain. It became thinner on the lower parts of it, and was gradually lost at the base of the brain. There was no such appearance on the left hemisphere.

It is probable that this inflammatory affection of the membranes may go on in some cases for a considerable time, spreading from one part of the brain to another, and even down upon the spinal marrow, and producing a succession of symptoms, as these parts become successively affected. A lady mentioned by Mr. Howship, had severe headache, impatience of light, and paralysis of the left leg and arm. After a short time, the paralysis was removed, but the arm continued so painful, as to be nearly useless. The pain of the head continued, and after two months, extended down upon the neck and back. She had then suppression of urine, severe throbbing pain of the back and loins, convulsive contractions of the shoulders, and a pain shooting through from the back to the breast. She had at

last intense pain of the head, neck, back, and whole body, so as to be unable to move a single limb, and died gradually exhausted by the most severe suffering, four months after the commencement of the disease. On dissection, serous effusion was found under the arachnoid membrane, and extensive deposition of coagulable lymph on the surface of the brain, on the upper, lateral, and inferior parts. There was copious deposition of the same kind under the cerebellum, and on the anterior part of the medulla oblongata, which was principally contained between the pia mater and the arachnoid membrane. The same disease was found to have extended along the membranes of the spinal cord.

The dura mater appears to be less liable to idiopathic inflammation than the pia mater. It is, however, affected in many of those cases in which suppuration within the cranium is connected with disease in the neighbouring bone. In such cases, it is usually found soft, thickened, spongy, irregular on its surface, and sometimes eroded. The same appearances have been observed without disease in the bone. In a case of long continued headach, described by Pawius, which terminated by convulsion, the dura mater, under the sagittal suture, was found eroded and perforated. There was also an abscess in the cerebellum. Rumlerus found the dura mater eroded in several places, in a young man who died comatose and convulsed. Several cases of the same kind are related in the *Miscellanea Curiosa*; and Haller found in several instances the falx eroded by large openings, and the hemispheres of the brain at these places adhering to each other. The dura mater is also liable to gradual thickening, which appears to be the effect of chronic inflammation. A remarkable example of this occurs in case 20, in which the disease consisted of gradual deposition of coagulable lymph between the laminæ of the dura mater. The particular character of the paroxysms in this case, consisting of sudden and transient loss of muscular power, without loss of recollection, is deserving of attention. A case is related by Lancisi, in which the symptoms considerably resembled those of this case. They consisted of paroxysms, which appeared to be a mixture of syncope and apoplexy. There were first attacks resembling syncope, then an apoplectic attack with hemiplegia, then again syncope, with convulsion. The pia mater was found remarkably thickened, and covered with a kind of ill conditioned pus. Willis found a remarkable thickening of the dura mater at the base of the brain, in a young woman who had been liable to severe headach, aggravated at the menstrual periods, and, at these times, accompanied by distortion of the neck to

one side ; she was also liable to vertigo and hypothyria, and died comatose. Similar cases are related by Morgagni.

#### IV.—*Disease of the Bone.*

I find no case in any writer exactly resembling the remarkable affection of the bone, which I have described in case 18. There was a complete destruction of nearly the whole inner table of the cranium, and in its place, a deposition of a soft pseudo-membrane, by which the dura mater was every where agglutinated to the diseased bony surface. This remarkable disease had probably been going on for a considerable time. The abscess in the brain was probably recent, and the immediate cause of death. The patient was a respectable married woman, and there seemed to be no ground for suspecting a syphilitic taint. Such a disease is probably to be considered as the result of chronic inflammation of the bone, gradually extending from one part of it to another. Many cases are on record, which illustrate the progress of this most important affection. A lady mentioned by Mr. Norris,\* after a fall, which produced at the time no alarming symptoms, was affected with pain in the head ; it generally fixed with greatest severity in the os frontis, which had been the seat of the injury. On this place, a tumour formed, which was opened three months after the injury, and the bone was found carious. The trephine was then applied, under a belief that matter might be lodged within, but none was found. The disease was confined to the bone, the dura mater being healthy. A similar tumour formed soon after on the occiput, under which also the bone was carious ; after some time, it exfoliated, a piece being thrown off the size of a sixpence ; the wound then healed. In this way, tumour after tumour formed on various parts of the head, and went through the same course. For several months, pieces of the outer table only were thrown off ; afterwards, the whole depth of the cranium was separated, at each time exposing the dura mater ; and from this period, the sores in the integuments did not heal. She died nine months after the commencement of these exfoliations ; and on dissection, portions of the skull were entirely wanting, consisting, as far as can be judged from the engraving, of the upper half of the occipital bone, more than a third of both parietal bones, and a considerable portion of both temporal bones. There was not in this case the slightest suspicion of syphilis. A man aged 28, whose case is relat-

\* Memoirs of the Medical Society of London, Vol. I.

ed by Mr. Wathen,\* was affected with a swelling the size of a pigeon's egg, on the left parietal bone. It gave him no pain, and continued nearly stationary for a year and a half, when a similar tumour appeared on the left side of the os frontis. These swellings increased, and after several weeks were united, so that they nearly covered the left side of his head. The swelling was colourless, without pain, and solid to the feel, and about this time he suffered some convulsive attacks. Caustic was applied to the posterior part of the tumour. When the eschar separated, the integuments were found to be two inches in thickness, and the bone beneath extremely irregular, sending up sharp bony spiculæ into the tumour, some of which were an inch in length. A similar eschar being taken out from the anterior part, shewed the same appearances. Much thin ichorous matter was discharged from the openings, and some pus. He had now frequent pain and fever, with occasional convolution and delirium; but continued to go about, and could walk many miles. He died gradually exhausted, but retaining his faculties to the last, two years and a half after the commencement of the complaint. On dissection, the whole left side of the cranium was found perforated by numerous openings, between which there were bony ridges, filaments, and processes of a variety of shapes, the sharper spiculæ piercing the substance of the diseased integuments. The two largest perforations corresponded to the seats of the two original tumours, and corresponding to these, there were two small abscesses in the brain. The inner surface of the bone was diseased in the same manner as the outer, and the dura mater was connected to it by a soft fungus, which arose from every part of the diseased bone. Morgagni mentions an extensive caries of the back part of the cranium, with remarkable thickening of the dura mater, which originated in a blow, and proved fatal after six years. Hildanus relates the case of a man, on whose cranium a number of tumours formed, from which pieces of bone were discharged, at each time exposing the dura mater. The sores had healed, and the man was alive at the time when the account was written, but affected with perfect paraplegia. Similar cases are related by Portal. In two that were under his own care, and in which he had no reason to suspect any syphilitic taint, the disease was arrested by mercury and antiscorbutics. Cases have also occurred, in which extensive caries existed in the base of the cranium, producing obscure symptoms, which were only explained by dissection. In a young man who died epi-

\* *Medical Observations and Inquiries*, Vol. V.

leptic, after having suffered long from intense headache, Zaccchias found the inner table of the occipital bone carious to a small extent the outer table being sound. A man mentioned by Mr. Charles Bell, who had a deep venereal ulcer in the throat, became suddenly paralytic, and after three days died apoplectic. On dissection, the ulcer was found to communicate through the basilar process of the occipital bone, with an ulcer of the medulla oblongata, and this ulcer had opened the basilar artery. A woman mentioned by Saviard, who was received into the Hotel Dieu, in consequence of an injury of the head from a fall, suffered successive exfoliations of both tables of the cranium, to such an extent, that the pieces, when put together, resembled the skull-cap, as it is sawn off in dissection. This process occupied two years, at the end of which she was dismissed in good health, but with the upper part of the brain covered only by integument. Allied to this disease, is a softened state of the bones of the cranium, which is sometimes met with. I believe it has been observed in some cases to continue a long time without making progress; but its tendency generally is to terminate by the formation of suppurating tumours, under which the bone is found carious.

Such are the effects of chronic inflammation affecting the bones of the cranium. It may arise from injuries, or without any apparent cause; its progress is slow, but when once excited it is impossible to conjecture how far it may extend. Like every inflammation of a bone it is apt to terminate by caries, or the death of the part—it may spread from one part to another, producing the most extensive mischief—or it may extend to the dura mater and brain, and thus be speedily fatal. Many surgical writers teach, that, in wounds or injuries of the head, it is the separation of the pericranium or dura mater that kills the bone. But every practical surgeon must have seen cases in which the pericranium was separated without any such consequence following, and others in which the bone became carious though the pericranium had not been separated. In a case related by Dessault, in which death followed a blow on the head after a month, the bone was externally sound, and its coverings healthy; the internal table was blackened through the whole extent of one of the parietal bones, yet the dura mater adhered to this portion as firmly as to the sound bone:—there was suppuration on the surface of the brain. It appears to be the inflammatory action that kills the bone, and this action we have seen may leave the seat of the injury, and spread from one part to another, until its progress is arrested by the powers of the constitution, acting in a manner which eludes our obser-

vation, and which is very little under our control. If this view of the subject be correct, it should perhaps diminish our eagerness to meddle with such cases by the trephine, and our expectation of curing them by frightful operations. If symptoms indicate the formation of matter under the bone, this must be evacuated, and a piece of carious bone should certainly be removed when it can be done without violence; but we must remember, that the real disease is the inflammatory action, which may continue to spread, though we may remove these effects which it has left in its progress. Perforations will remove the danger from lodgement of matter, but this danger only; and their other effects on parts, thus prone to inflammatory action, are extremely ambiguous. When matter is formed within, it is probably the effect of inflammation of the membranes, and not a necessary effect of the disease of the bone; and cases are related by Morgagni and others, in which, after injuries of the head, matter was formed betwixt the cranium and the brain, without the least appearance of disease in the bone. It is perhaps a point deserving inquiry, whether too much attention is not sometimes directed merely to the state of the bone; whether we do not waste time in attending to its progress, and in watching the proper periods for making perforations; while during this interval an insidious disease is going on within, which will indeed at length render perforations necessary, but which might, by active treatment, be prevented from advancing to suppuration.

A remarkable circumstance in the history of these affections is, the slowness with which the bone falls into disease, and the length of time during which a small extent of disease may exist, producing urgent symptoms, but without making much progress. A lady mentioned by M. Marechal, after a slight blow on the head, suffered constant pain in the part, often aggravated into violent paroxysms, which the most active treatment had failed to remove. After severe suffering for several years, an incision was made, and a small portion of the bone was found carious. This portion was removed by the trephine, and the patient got well. The disease in this case was probably superficial, and I believe in some similar cases, simply exposing the bone, and assisting its exfoliation, has answered as well as this formidable operation. In other cases of this kind, the disease is from the first confined to the inner table, from which it may, after a long interval, extend inwards, and terminate by fatal disease in the brain. A lady mentioned by Mr. Howship received, at the age of 15, a slight blow on the right parietal bone, and for 30 years was liable to severe head-

achs which were constantly referred to that spot as their centre and principal seat. She then became drowsy, and her vision was impaired, and at the age of 50 she died comatose. At the seat of the injury, the bone was carious on its inner surface, and so thin from absorption as to be transparent—the brain under this part was of a dark livid colour and much indurated, and this disease extended through the whole middle lobe. In some cases, again, it appears that the disease may be first external, and that it may afterwards leave its original seat, and extend to the internal parts. A boy mentioned by Mr. Howship, received at school a blow on the head with a ruler. It was followed by a small sore, which continued to discharge matter for six years. It then healed, and soon after his sight was impaired, and he became epileptic. The trephine was applied on the seat of the injury without relief; he died on the third day after the operation. The bone and dura mater were sound, but the pia mater, under the seat of the injury, "had evidently suffered from chronic inflammation," and the brain was much indurated through the whole extent of the middle lobe.

A singular variety of this disease occurs, in which, after an injury of the head, a portion of the bone disappears by absorption, without ulceration of the integuments. A child, aged nine months, mentioned by Mr. Howship, received an injury on the right parietal bone from a fall. There was no wound and no urgent symptoms at the time; but several weeks after the accident the pulsation of the brain was distinctly perceived at the place of the injury, and the child became paralytic in the left side. At the age of four years, when the account was written, she had recovered the use of the left side, which had been improving gradually, and was otherwise in good health, but there was still a considerable deficiency of bone at the place of the injury. When she cried or coughed, this part became tense, and evidently swelled. Many cases have occurred in which tumours on the dura mater have occasioned absorption of a portion of the bone, and have appeared under the integuments.

#### V.—*Disease of the Pericranium.*

Many obscure affections of the head, often accompanied by very urgent symptoms, have been found to be connected with a disease of the pericranium, the history of which presents some very singular phenomena. In the cases related by Sir Everard

Home,\* the symptoms in general were headach, with various uneasy feelings in the head, a painful tenderness of the scalp at a particular spot, with some degree of swelling or thickening of the integuments at the place. In one the sight and hearing were considerably impaired, and in several of the cases there were fits resembling epilepsy. They were treated by dividing the integuments and pericranium freely, down to the bone, and then dressing the wounds with lint, so as to allow them to heal slowly, with suppuration. In making the incision, the pericranium was found morbidly sensible and considerably thickened, and in some of the cases indurated, approaching to the structure of cartilage. This treatment was in some of them followed by immediate and permanent relief; in others the patient continued liable to fits or head symptoms upon any excess. In some of them the incisions healed without any affection of the bone being discovered, in others a portion of the bone appeared white and porous, or honey-combed, and a limpid fluid appeared to percolate through it, which returned immediately as often as it was wiped off. In one of these cases the porous piece of bone exfoliated after the wound had been dressed with dry lint for six weeks; the wound then healed, and the cure was permanent. In another, after waiting eight weeks for the exfoliation, he touched it repeatedly with dilute nitrous acid, after which it exfoliated, and the cure was permanent. In one fatal case he found the pericranium thickened into a mass of a fibrous bony texture, and, corresponding to this part internally, there was a similar thickening and induration of the dura matter. Most of these cases had been treated by long courses of mercury without benefit, in some of them with aggravation of the symptoms.

This affection seems to correspond with the disease which has been described by Mr. Crampton, under the name of Peziostosis.† Among his cases of this disease affecting various parts of the body, there are two remarkable examples of it in the head; the one acute, the other chronic. In the former, a boy of 14, the complaint began with a small angry tumour on the right side of the nose, from which, after some days, a swelling extended along the right eye-lids and forehead, with considerable erysipelatous inflammation, and fever. On the 9th day he became suddenly comatose, then convulsed, and died on the 12th. On dissection, the pericranium covering the frontal

\* Memoirs of a Society for the Improvement of Medical and Surgical Knowledge, Vol. III.

† Dublin Hospital Reports, Vol. I.

bone was found red, thickened, and detached from the bone, much purulent matter lying between them. Internally the dura mater was detached to an extent corresponding to the disease without, and a greenish puriform fluid was effused between it and the bone. The inner surface of the dura mater was also covered with pus; the pia mater was red, very vascular, and covered with pus, to the extent of two inches, on the part corresponding to the principal disease of the pericranium. The other case is that of a woman, aged 32, who was affected with a tumour the size of half a walnut over the left parietal bone. It was soft and elastic, and its origin was ascribed to a blow six months before; there was an opening in the tumour by which a probe could be passed down to the bone. She had intense pain in the left side of the head; the right arm was withered and paralytic; both lower extremities were feeble; her speech was indistinct; she had vomiting and frequent epileptic fits. The tumour was divided freely down to the bone, and in doing so the pericranium was found thickened, firm, and fibrous, and morbidly sensible. It formed the principal part of the tumour. The bone under the tumour was found rough, and superficially carious. A portion of it was removed by the trephine, and the dura mater under it appeared very vascular and rather thickened. For six days after the operation she had fever, extensive erysipelas of the head, delirium, and convulsions. Suppuration was then established, and all these symptoms were relieved. In the course of the cure a slough was detached from the dura mater. A fortnight after the operation she had recovered the use of her arm, and was free from complaint.

Tissot\* seems to have met with this disease, and to have treated it upon the same plan, though he gives a different explanation of the effect of his treatment. He describes a case in which an intense pain was confined to a very small spot, at the posterior angle of the right parietal bone. It had resisted for a long time all the most powerful remedies, venesection, arteriotomy, issues, cupping, &c. He cured it immediately and permanently, by dividing the part down to the bone, and encouraging suppuration from the wound. He ascribes the cure to the division of the subcutaneous nerves. A woman mentioned by Pouteau, received a blow behind the left ear, from the immediate effects of which she soon recovered, but she continued to be affected with pain in the spot for four years. She then had convulsions, paralytic symptoms, inarticulate speech, and a long train of the most urgent symptoms, which sometimes resembled mania and sometimes tetanus. She had still pain at

\* Tissot, Epist. Med. Var.

the place of the injury, where a small portion of the integument was red, and very gentle pressure upon the spot produced convulsion. By a free incision down to the bone, and allowing the wound to suppurate, all these complaints were removed. A boy mentioned by the same writer, received an injury on the crown of the head by a fall, at the age of eight years. A painful feeling continued in the scalp at the place of the injury, and for ten years, he was liable to intense headaches, which afterwards became so violent, as often to occasion insensibility. At the age of 24, there was, at the upper part of the right parietal bone, (the original seat of the injury and of the subsequent uneasiness,) a spot which was slightly red and a little swelled, the hair upon it was coarse, and stood out like bristles, and pressure upon it produced intense pain. The pain extended to the right eye, the vision of which was obscured when the pain was violent. By a free division of the parts, every symptom was removed. A similar case is related by M. Gervais, in which the pain returned periodically, and the patient suffered epileptic fits daily. A slight touch on the affected part produced syncope. On dividing the integuments and pericranium, the surface of the bone was found carious; this soon exfoliated, and the patient recovered perfectly. Valsalva has taken notice of a remarkable thickening of the pericranium, in a case of long-continued headache with occasional delirium, and at last convulsion. There was serous effusion in the brain; he says nothing of the state of the dura mater or the bone.

This singular affection, Sir E. Home considers as beginning in the dura mater. Mr. Crampton thinks it commences in the pericranium. The latter opinion seems to be the most probable, for in some of Sir E. Home's own cases, it was cured by simply dividing the pericranium. It appears, however, that, in the progress of the disease, both the bone and the dura mater are apt to be affected.

#### V.—Disease of the Sinuses.

I suspect that disease in the sinuses of the dura mater occurs more frequently than we suppose, in connection with, and probably the cause of, various diseases of the brain. How much diseases of these parts would affect the circulation of the brain, is obvious, and perhaps the condition of them in affections of the head has not been sufficiently investigated. Original deviations from the common size and distribution of the sinuses are frequently met with, but there can be little danger of confounding these with alterations in their area produced by dis-

ease; for, in the latter case, there will be the marks of chronic inflammation in the dura mater forming the sinus, a particular part of it being thickened, spongy, fungous, or ulcerated. This was exemplified in case 17, in which there can be little doubt that the original disease was inflammation of the coats of the lateral sinus, terminating by suppuration, and combined with caries of the bone at the spot which seems to have been the principal seat of the disease. In the Queen of Louis XV. who had long suffered from severe complaints in the head, and at last died of dropsy, the superior longitudinal sinus was found obliterated by ossification of its coats.\* The subject is worthy of particular investigation.

#### SECT. IV.—CAUSES AND TREATMENT OF CHRONIC INFLAMMATION OF THE BRAIN.

In its least active form, the disease is an example of the pure scrofulous inflammation, which in other parts of the body is often excited by very slight causes, and often appears without any cause that we can trace. On the surface of the body, we see it excited by very slight injuries, which, in a healthy constitution, would produce no bad effect. It frequently follows altered determinations of blood: thus I have seen suppression of the menses in a young woman of a scrofulous habit, followed immediately by extensive abscess in the mamma. Scrofulous or chronic inflammation also appears in connection with a variety of febrile complaints, as if the mere febrile state brought it into action. In this manner we meet with it affecting the lungs, the bowels and the glandular parts, in continued fever, and in scarlatina. These observations apply to chronic inflammation of the brain.

1. It often appears in the course of various febrile diseases, as if the mere febrile action induced it. In this manner, Hydrocephalus may follow measles, scarlatina, and continued fever. I have given a remarkable case in which it followed inflammation of the bowels: it has also occurred in connection with pneumonia.

2. It may follow injuries; and this, I suspect, is a more frequent cause of hydrocephalus than we are generally aware of, the injury being often slight, and the interval considerable between it and the appearance of any alarming symptoms. A man, aged 40, of a scrofulous habit, was standing on a cart at Leith races, when the horse moving forward he lost his ba-

\* Portal, Cours d'Anatomie Medicale.

lance and fell out of the cart, striking his head upon the sand. He felt at the time no inconvenience, and for a week attended to his business, but complained frequently of headache. He was then confined to the house from increase of headache, vomiting, and slight fever; after a few days, he became oppressed, then comatose, and died at the end of the second week. All the ventricles of the brain were found distended with serous fluid. A girl, aged 13, fell from a swing, and struck her head with some violence on the ground. From that time she complained of headache, but was not confined, nor was her health otherwise affected, until six weeks after the accident, when her headache increased, and was accompanied by vomiting and frequent pulse. The vomiting soon subsided, and was followed by slight delirium, and this by coma. She lay in a state of coma five or six days, and then died, two months after the fall. All the ventricles of the brain were found distended with serous fluid, without any disease in its substance.

3. *Suppressed Evacuations.*—The most common example of this is suppression of the menses, which in young women of unsound constitutions is frequently followed by dangerous affections of the brain. Such suppression, followed by headache, is always to be considered as a case requiring minute attention. Effusion in the brain, following suppression of urine, or remarkable diminution of this secretion, affords another example of this kind, which presents a most interesting field of investigation. In February 1816, a gentleman aged 70 complained to me that he could pass no urine; he made no other complaint, and on introducing a catheter, the bladder was found to be empty. For six days he continued in this state, keeping the house, but complaining of nothing, except once or twice, when closely questioned, of slight uneasiness in his back. On the 7th day he had slight confusion of thought and indistinctness of speech. On the 9th he became comatose, and died on the 13th. On dissection, considerable serous effusion was found in the ventricles of the brain: the bladder was empty. Both kidneys contained a good deal of urine. Both ureters were completely obstructed by large calculi, the one immediately at its commencement at the kidney, the other about three inches from the kidney. Similar symptoms follow the proper Ischuria renalis, or suspension of the secretion of urine. The causes of this affection are very obscure. It often appears in connection with peritoneal inflammation, and sometimes occurs in continued fever. In a remarkable case of it which I saw lately, the only morbid appearances were slight inflammation on the

liver, and a remarkable dark granulous appearance in the cellular membrane behind the left kidney.

4. Chronic inflammation of the brain often appears in persons affected with chronic or scrofulous disease in some other part of the body. This is called translation of disease, and I shall not object to the term, provided it be used merely to express the fact, that, in persons affected with such disease in other organs, the brain often becomes affected. The most frequent example of this that has occurred to me, is the brain becoming diseased in persons ill of phthisis. A man aged 20 had been for several months affected with cough, expectoration often bloody, hectic fever, night sweats, difficult breathing, increasing debility and emaciation. He was becoming rapidly worse, and was confined to bed, when on the 18th October, 1813, he had frequent desire to pass urine, which was much diminished in quantity. After a few days, he had severe headache, with impatience of light. After several days more, these were followed by confusion of thought, and slight delirium, and these by coma, with dilated pupil: he died on the 28th. From the first appearance of these complaints, the pulmonary symptoms had diminished, and for the last six or seven days the cough had entirely ceased. The pulse had continued about 120. On dissection, much effusion was found in the ventricles and on the surface of the brain. The fornix and septum lucidum were broken down into a soft white pulp. The left lung was a mass of tubercular disease, and contained several abscesses. The right was also tubercular, but not ulcerated. I have seen several other cases of the same kind. In one of them, the head symptoms began about a month before death, with attacks of loss of speech, continuing a few minutes, and accompanied by a sensation of pricking and numbness of the right side of the face. A fortnight after this, he had headache and slight delirium, followed by stupor, which was fatal in another fortnight. The cough had gradually subsided as the head symptoms advanced. In another man, aged 22, who had been ill five weeks with severe pulmonary complaints, the first head symptom was double vision, without headache. He complained of dysuria, and his pulse was irregular. He died comatose after three days, and considerable serous effusion was found in the ventricles of the brain.

In such cases the first disease cannot be considered as the cause of the head affection; it merely marks the tendency to scrofulous or chronic inflammation; and in a habit so disposed, the disease of the brain may be excited by causes which elude our observation. On the same principle, disease in the brain-

may appear in combination with disease in any other organ, especially in unhealthy children. In such cases the liver has often been found diseased, and founded upon this observation, I have somewhere seen certain crude speculations on diseased liver being a *cause* of hydrocephalus.

In regard to the *Diagnosis*, I have already mentioned the symptoms which may be considered as the peculiar indications of a dangerous affection of the brain. But the most important and the most difficult part of the diagnosis is in the beginning of the attack, and before the appearance of these peculiar symptoms, to distinguish the disease from the simple fever. I do not know any symptom that can be relied upon for this purpose. The distinction must depend upon that minute and careful attention to the correspondence of the symptoms which I have already alluded to. Severe headach, with oppression, combined with smart fever, foul dry tongue, and the usual febrile symptoms, *may be* simple fever. The same degree of headach, with slight fever and clean tongue, should be suspected of being an affection of the brain. The remarkably variable state of the pulse which I have mentioned, is also worthy of attention, and I think it does not occur in any other febrile disease. It however is not always present in head affections, and, when it is present, it is often not till an advanced period of the disease.

On reviewing the facts that have been related in this paper, the following pathological principles appear to be fair and legitimate conclusions.

1. That in cases of hydrocephalus, the coma and other symptoms are not to be considered as the direct effect of the effusion, but of that morbid condition of the brain of which the effusion is the consequence.

2. That we have no certain mark, which we can rely upon, as indicating the presence of effusion in the brain. Slowness of the pulse, followed by frequency, coma, squinting, double vision, dilated pupil and paralytic symptoms, we have seen, may exist without any effusion.

3. That these symptoms may exist in connection with a state of the brain which is active, or simply inflammatory; while the disease is the subject of active treatment, and while by such treatment, adopted with decision and promptitude, we have the prospect of arresting its progress in a considerable proportion of cases. The ground of prognosis in particular cases is obvious. The more they approach to the character of acute phrenitis, the prospect of cutting them short will be the greater, and the more they partake of the pure scrofulous inflammation, it will be the less. In all of them, the period for active

practice is short, the irremediable mischief being probably done at an earlier period of the disease.

This leads me to the important question, Has Hydrocephalus been cured? Many cases have certainly recovered, which, in their symptoms, bore the strongest resemblance to it. By some, these cases have been confidently brought forward as examples of hydrocephalus cured, while others have only considered them as remarkable from their singular resemblance to that disease. If the doctrine be admitted which I have contended for in this paper, we shall be able to assume a more precise principle. We shall see reason to believe, that we have no certain mark by which we can ascertain the presence of Hydrocephalus, but that all the usual symptoms of it may exist in connection with a disorder of the brain, which, if allowed to go on, would probably lead to hydrocephalus, but which, if treated with decision in an early stage, holds out a fair prospect of being able to arrest its progress. Whether the fluid can be absorbed and the disease cured after effusion has taken place, must ever remain matter of conjecture; but this important principle I venture to state as extremely probable, that, in a great proportion of cases, the absorption of the fluid, if it did not take place, would in no respect improve the situation of the patient, as there would still remain that deep-seated and irremediable destruction of the central parts of the brain, which so often accompanies the effusion, and which, without any effusion, may be fatal, with all the usual symptoms of Hydrocephalus. It was well remarked by an eminent writer, "dropsy is the effect of a disease, not the disease itself;" it is strictly true of the dropsy of the brain.

In the treatment, every thing depends upon the remedies being applied at an early period, and in the most decided manner. The remedies are few and simple. Blood-letting, repeated according to the age and habit of the patient, purging, and cold applications, I consider as those on which our chief reliance is to be placed. The effect of blistering is ambiguous. When it is employed, it should perhaps be on the back of the head and neck. In that situation, it is probably more likely to be useful than on the crown, while it does not interfere with a more powerful remedy,—the effectual application of cold. I have little reliance on mercury. In some cases, a sudden and smart salivation has appeared to be useful, but I suspect it is rather upon the principle of a drain, or counter-irritation, than by any specific operation as mercury. In many cases, especially during the first, or most active stage, the indiscriminate employment of mercury, I apprehend, may be in-

jurious. Still less reliance is to be placed in diuretics ; but in the more acute cases, digitalis may be useful, by restraining vascular action. In applying cold to the head in the most effectual manner, it should be done by a stream of cold water directed against the crown of the head, and continued for a considerable time, until the full effect of it be produced. Applied in this manner, it is a remedy of great power ; it even requires, in many cases, to be used with discretion. Under its operation I have seen a very strong man thrown, in a very few minutes, into a state approaching to asphyxia, who immediately before was in the highest state of maniacal delirium, with morbid increase of strength, defeating every attempt of four or five strong men to restrain him. The following example of its beneficial effect occurred to me lately : A strong plethoric child, aged about 5 years, after being for one day feverish, oppressed, and restless, fell rather suddenly into a state of perfect coma, without convulsion, or any other symptom. She had lain in this state about an hour when I saw her ; she lay stretched out on her back, motionless, and completely insensible, her face much flushed, and turgid. She was raised into a sitting posture, and a basin being held under the chin, a stream of cold water was directed against the crown of the head. In a few minutes, or rather seconds, she was completely recovered, and next day was in her usual health. The same remedy I am in the habit of using, with the best effect, in the convulsive diseases of children.

Under the treatment which I have now mentioned, I have seen many cases recover, which, in all their symptoms, when compared with their fatal cases, might fairly be considered as examples of chronic inflammation of the brain. Many of them were cut short at an early period, when the symptoms might perhaps only be considered as highly suspicious ; but others, as will be seen, exhibited the most characteristic symptoms of this dangerous affection of the brain. I shall conclude this essay by a very few examples of different forms of the disease.

CASE I.—Miss B. aged 17, had violent headach, intolerance of light, vomiting, much oppression, approaching to coma ; pulse 120 ; tongue clean and moist. She was treated by general bleeding, which was repeated four times ; purgatives ; cold applications to the head ; and blistering on the neck ; and the case terminated favourably, after she had been five or six days in a state that indicated much danger of a serious affection of the brain.

**CASE II.**—A girl, aged 11, had violent headach, vomiting, stupor, bordering on coma, dilated pupil, great obstinacy of the bowels, pulse 130. Had been ill five or six days. Purgatives, blistering, and mercury to salivation, had been employed, without benefit. One bleeding from the arm gave an immediate turn to this case. The headach was relieved ; the pulse came down ; the vomiting ceased ; the bowels were acted on freely by the medicines which they had formerly resisted ; and in a few days she was quite well.

**CASE III.**—Mrs. J. aged 45. After the catamenia had been obstructed for four months, had severe headach, sense of weight and fulness in the head, much oppression, and double vision ; pulse was at first 72, but on the following day had risen to 100. On the first day she was bled to xxvij ounces with little relief. On the second topical bleeding, blistering and smart purging were used ; but the symptoms continued unabated. On the third day, another bleeding of xx ounces gave a turn to the complaint, and in a few days more, with purging and spare diet, it terminated favourably. The last symptom that yielded was the double vision. It subsided slowly, the two images gradually approaching nearer each other ; but was not entirely gone for nearly a fortnight.

**CASE IV.**—Miss D. aged 7, had severe headach, impatience of light, stupor, slight delirium, squinting, and great obstinacy of the bowels ; pulse 120 ; tongue at first foul, but became clean after a day or two. The other symptoms continued unabated for a week, during which her situation was considered as hopeless. Strong purging being then produced, she recovered in a few days. Topical bleeding and blistering had also been used. The case might probably have been much shortened by general bleeding.

**CASE V.**—Miss H. aged 11, one of a family in which several had died of hydrocephalus. September 21st, 1817, had severe headach, giddiness, and much vomiting, pulse natural. Topical bleeding, purgatives, &c. being employed, she was rather relieved on the 22d. On the 23d, she still complained of her head, and the pulse had fallen to 60 ; on the 24th, the pulse fell to 50, there was much headach, great oppression, and dilatation of the pupil. Two bleedings from the arm were now employed with much relief,—the second produced syncope. 25th, Pulse 80 to 90, symptoms relieved. The complaint then subsided gradually under the use of

purgatives and cold applications, and at the end of the month she was well.

**CASE VI.**—Miss W. aged 15, had violent headache for several days, with impatience of light, then stupor, squinting, double vision, and transient fits of delirium. The pain suffered paroxysms of violent aggravation, which produced screaming and violent agitation of the whole body, and, at times a threatening of convulsion. Bowels very obstinate, occasional vomiting, pulse very variable, sometimes extremely frequent, at other times little above the natural standard. This very violent case was treated by repeated general and topical bleeding, blistering, purgatives and mercury given to affect the mouth. Under this treatment, the complaint subsided, but after she appeared to be well, it suddenly returned with the same violence as before, and was again subdued by the same remedies. In this manner she relapsed five or six times, and at last got well after the case had been drawn out to many weeks.

**CASE VII.**—Mr. L. aged 17. 1st February 1810, had symptoms of continued fever for a week; the skin then became cool and the tongue clean, but he had severe headache with considerable stupor; Pulse 100. General bleeding was then employed, followed by purging and mercurial frictions, and after a few days the symptoms were alleviated, but there was still much headache, with oppression, and a remarkable slowness of speech.

- 14.—Stupor increased, pulse 86, tongue clean, skin cool.
- 16.—Much incoherent talking, and unmanageable delirium.
- 18.—Increasing stupor. Pulse 84.
- 19.—Partial relief, after smart purging.
- 20.—21.—Stupor increased.
- 22.—Perfect coma, eyes natural, pulse about 100.

He had continued in this state four days, when, on the 27th, strong purging was induced to the extent of about fourteen stools in the day, with complete relief. On the 28th, there was some delirium, which subsided in another day. For a week he continued to complain of headache and weight in the head, but on the 10th of March was free from complaint.

**CASE VIII.**—Miss P. aged 21. July 1815, had symptoms of continued fever, which went on for three weeks. The pulse then came down to 84, and the tongue became clean, but she had much headache, transient delirium, considerable stupor bor-

dering upon coma, and the pulse rose again to 120. In this state she continued a fortnight, with every appearance of a head affection of the most dangerous character. Repeated topical bleeding, blistering, purgatives, and large doses of calomel being employed without relief. The calomel did not affect the mouth, and had very little effect on the bowels. At the end of the fortnight, she was suddenly seized with copious discharge of blood from the bowels. This continued three days, and left her extremely pale and exhausted, but free from stupor, and the headache was much relieved. In five or six days more she was well.

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### *Experiments on the Transfusion of Blood by the Syringe.*

By JAMES BLUNDELL, M. D. Lecturer on Physiology at Guy's Hospital.

[From the Medico-Chirurgical Transactions, vol. 9.]

A FEW months ago I was requested to visit a woman who was sinking under uterine hemorrhagy. The discharge had stopped before my arrival, but her fate was decided, and notwithstanding every exertion of the medical attendants, she died in the course of two hours.

Reflecting afterwards on this melancholy scene, for there were circumstances which gave it a peculiar interest, I could not forbear considering, that the patient might very probably have been saved by transfusion; and that, although there was little opportunity for operating in the usual manner, the vessels might have been replenished by means of the syringe with facility and promptitude. As it seemed doubtful, however, whether the blood would remain fit for the animal functions after its passage through the instrument, the following experiments were instituted with a view to ascertain the point; and they are now submitted, with all their imperfections, to the consideration of the Society, under the hope, that they may contribute a little to excite the attention of the medical philosopher, and recommend a neglected operation to the experimental investigation which it seems to deserve.

The femoral\* vessels of the dog were laid bare *at the groin*; and a pipe, sufficiently large to fill the artery, was introduced with its extremity towards the heart. On removing the lig-

\* Register, Experiment 2.

ture, which had been thrown around the vessel to prevent a premature discharge, the blood rushed out with such impetuosity, that eight ounces escaped in the course of two minutes, and the discharge soon afterwards ceased. From this discharge of blood, the most alarming symptoms arose ; distress and gasping, struggling and convulsions, and at length a profound fainting, marked by stoppage of the circulation, by insensibility, and by a complete relaxation of the abdominal muscles.

In this condition the animal was suffered to lie for a few seconds, when six ounces of blood taken from the artery of another dog, were injected into the femoral vein, in a manner which will be hereafter described. In consequence of this operation, it soon revived ; the abdominal muscles became firm, and the respiration regular, sensibility was restored, and the blood again circulated, indeed so briskly, that it pushed away the concretion which had formed in the femoral tube, and rushed out. So sudden and complete was the resuscitation, that the animal seemed rather to awake from sleep, than arise from apparent death.

To give this experiment (which will be found in the annexed register, together with various repetitions,) all its force, it may be proper to observe, that the combination of symptoms just enumerated is mortal, and that whatever the symptoms be, the dog invariably dies, when left to its natural resources, if the blood is suffered, as in this instance, to flow from the femoral tube, until the discharge spontaneously ceases. • Transfusion alone can save it.

From facts like these it is evident, that the transmission of blood through the syringe, does not unfit it for the animal purposes ; but as this is a principle, which lies at the bottom of the whole operation, it may be proper to confirm it by the following experiments.

The femoral\* vessels of the dog were laid bare as before ; and a pipe was introduced into the artery and vein. Then, by means of the syringe, which will be hereafter described, the blood which was suffered to flow into a cup from the artery, was directly returned into the vein ; and this operation was continued, not for a few seconds only, but for twenty-four minutes. Yet the dog sustained but little injury.

It should be observed here, that if the blood be suffered to flow in a full stream from the femoral artery of a dog below the middle size, about half a pint will be discharged in the course of two minutes ; but as this operation was carried on for twenty-

\* Register, Experiment 6.

four, and the artery gave off its blood impetuously during the whole time, it follows, that twelve pints of blood must have entered the cup, and been transmitted by the syringe to the veins. The whole weight of the dog, however, did not equal twelve pounds, and hence it is obvious, that the same blood must have passed the syringe repeatedly; a conclusion which is confirmed by the highly arterial characteristics, which the blood had acquired, when the operation terminated. This experiment will be found, together with repetitions, in the appendix; and proves, like the former, perhaps in a still more impressive manner, that blood may be transmitted through the syringe, and this too repeatedly, without becoming unfit for the purposes of life.

From this principle it may be inferred, that the transfusion of human blood by the syringe to the veins of a human subject, may be attended with the most important advantages; but as accidents may occur in attempting the operation, it is necessary to ascertain how far they will affect its success.

Although the blood sustains but little injury when discharged into the cup and promptly transferred to the veins, it seems to suffer in some way or other if the transfusion be delayed.

A dog\* was drained by the femoral artery, and replenished by the vein; but in performing this experiment, the human blood was injected instead of the canine, and it was suffered to be in the cup between fifty and sixty seconds before it was thrown in. The animal expired on the table. At first indeed it revived, the blood circulated, the respiration was renewed, and sensibility was restored; but these flattering symptoms were of short duration, and in the course of a few minutes it died.

In a second† experiment, conducted in the same manner, but with this difference, that the blood remained in the cup for thirty seconds only instead of sixty, the resuscitation was complete, as the animal, though languid, was able to walk, and became so lively and sensible, that it took a pleasure in being caressed. Yet it died in the course of twelve hours.

From a cursory survey of these and similar experiments, it appears that the blood, by lying in the cup between thirty and sixty seconds, is rendered unfit for the purposes of life. Although, however, on a first view they appear conclusive, they are in reality liable to some strong objections, arising out of a principle which I shall next endeavour to elucidate.

It has been very generally asserted, that the blood of one kind of animals may be substituted with impunity for that of

\* Register, Experiment 8.

† Register, Experiment 7.

another ; and that the dog, for instance, would suffer but little inconvenience, if it were drained of its own blood and replenished from the sheep. This principle, however, which is now seldom controverted, is rendered extremely doubtful by the following experiments.

Three\* dogs were drained of their own, and supplied with human blood, in the manner already described ; only the injection was performed without delay ; for the blood was taken up by the syringe while flowing in the cup, and injected into the vein immediately. Yet all these dogs, although they recovered for a time, died, one of them in a few minutes, another in a few hours, and a third several days afterwards. The last, indeed, appeared for a time likely to recover, but it died of a dropsy of the pericardium. It is proper however to add, that another dog, on which a similar operation had been performed by Mr. Goodridge of Barbadoes, a gentleman who was at that time finishing his studies at the united hospitals, eventually recovered. The truth is, the constitution of this animal was so vigorous that it resisted the shock ; and yet, for a few hours after the operation, a variety of unfavourable symptoms occurred. This experiment, therefore, is in reality in unison with my own ; for it is not contended that the exchange of blood necessarily destroys life, but merely that it may sometimes endanger it.

These experiments acquire additional strength, when associated with others instituted by Dr. Leacock (also of Barbadoes) a few months before ; experiments to which I was wholly indebted for my first notions upon this subject. From these it appears, that if a dog is drained of its blood *until apparent death is produced*, it may indeed be revived for a time, and very completely too, by replenishing it from the sheep ; but it generally dies in a few days afterwards.

Connected with my own, these experiments of Dr. Leacock possess a peculiar interest ; for although they harmonize with them in the general result, they differ materially in their circumstances. It was arterial and not venous blood ; the blood of the sheep, and not the human that was substituted ; and it deserves particular notice, that the transfusion was not performed by the syringe, a method of operating with which he was unacquainted, but simply by the tube.

In considering what has just been advanced, two reflections occur to the mind : first, that transfusion by the syringe powerfully recommends itself, as it enables the operator to inject

\* See Register.

human blood into human veins ; and secondly, that it invalidates the experiments already related, which seemed to prove, that the delay of the blood in the cup renders it unfit for the animal purposes. These were performed with the human blood ; and it is obviously difficult to determine, whether death must be attributed to the delay in the cup, or to the substitution of the human blood for canine. Nor in operating on the dog can this objection be avoided : for its own blood coagulates so rapidly, that it cannot be employed. The subject deserves further investigation.

In transfusing human blood by means of the syringe, it is obviously the venous and not the arterial blood that must be injected ; for although it would be easy to induce an attendant to submit to the common operation of bleeding, there are few perhaps but would object to the opening of an artery, even the temporal itself. It is of importance, therefore, to remark, that the venous blood seems to revive an animal, as well as the arterial.

A dog\* was drained of its blood by the femoral artery till apparent death was produced ; a fresh supply was then injected in the usual manner by the vein. In performing this experiment, however, venous blood was substituted for the arterial ; yet the animal recovered, nearly in the same manner as if arterial blood had been transfused. This experiment was the more decisive, as the dog was suffered to lie for a few seconds in a state of apparent death before transfusion was attempted.

In transfusing blood by the syringe, there is a risk lest air should be introduced. To ascertain whether this accident would occasion death, five† drams of atmospherical air were injected into the femoral vein of a healthy dog, which was scarcely larger in the body than a full sized cat, in quantities of a dram at a time : but the animal suffered very little injury. It is true, indeed, that deep sighing recurred during the operation, that the pulse became very irregular, and the muscular system tremulous ; but these symptoms are produced independently of experiment, from the mere alarm occasioned by tying the animal to the table. The general health, however, certainly suffered. There was restlessness, vomiting, and a continuance of the muscular tremor ; and this, it may be remarked, together with the small size of the animal, rendered it difficult to observe the pulse. On the other hand, however, the restlessness continued for a few hours only, and the vomiting occurred but once ; the appetite was little impaired ; the

\* Register, Experiment 12.

† Register, Experiment 13.

animal recovered in three days; and during the whole of this period, no symptom of immediate danger occurred. Yet compared with the small size of the animal, the quantity of the injection was large.

In a second\* experiment upon the same dog, about three drams of air from the lungs were blown into the femoral vein, without even producing much *temporary inconvenience*; so that it seems indisputable, that small quantities of air may enter the vessels without destroying life.

Nor is this principle, which is confirmed by similar experiments of Dr. Haighton and others, materially invalidated by those which have been made upon the horse. For although it be granted that this animal may be killed by blowing air into the veins; this solitary fact can bear with little weight upon the present question, unless the quantity of the air, and the manner of its introduction be also ascertained.

There is little risk in transfusing the human blood by the syringe, lest the operation should be interrupted by concretion; for its coagulation is slow.

Three† drams of blood drawn from the femoral artery of a dog, began to concrete in about ten seconds, and had become completely solid in eighty. But an ounce of blood taken from the arm of a girl of an epileptic disposition, but in other respects healthy, did not begin to coagulate distinctly under a minute, and was not completely consolidated in less than six. The blood of the sheep and the ox coagulates more rapidly than the human.‡ Now if the dog's blood may, as the preceding experiments prove, be transfused by the syringe without material obstruction from concretion, there can be no difficulty in transmitting the human blood, which requires five times the interval for its coagulation. Indeed no obstructions of this nature occurred even in conducting those experiments, in which the human blood was suffered to lie in the cup for several seconds before it was injected.

It may be proper to remark, that in executing these experiments, both water and weak wine were injected with impunity, and the instrument was not warmed.

[The experiments referred to in this paper, are necessarily omitted. They will be found in the volume of the *Medico-Chirurgical Transactions*, from which the above has been extracted.]—ED.

\* Register, Experiment 14.

† Register, Experiment 15.

‡ See Register.

*A Case of Cæsarean Operation.*

[From the Medico-Chirurgical Transactions, vol. 9.]

**O**N the 16th of February, 1817, at three o'clock in the morning, I was summoned to a woman of this town in labour; she was said to be incapable of bringing forth her child.

On my arrival I found a little woman out of bed, who in her early youth had been ricketty in a very high degree, and had attained the age of eight years before she could stand without assistance, and still less could walk. The head and upper part of the body were well formed; but from the os ilii downward, the frame was entirely crooked, and particularly the leg and thigh quite twisted.

She had pains at this time; but, upon examination, the orifice of the uterus was discovered still to be situated very high, and to be but little opened. Behind it there was a hard body, which I took for the head; at a very great distance indeed, scarcely attainable with the finger. As for the rest, the woman had laboured before under spasms, and the present pains appeared spasmodical fits, rather than true labour pains. I prescribed for the patient anodyne remedies and steam-baths, and recommended her to go to bed, and as the weather proved rather cold, to keep herself warm. When after a short examination, I observed no change in the orifice of the uterus, nor any increase of pains, I left the person about six in the morning, and enjoined the midwife present, to observe her attentively, and inform me of every alteration. She made use of the prescribed medicines regularly, and towards ten o'clock I paid her a second visit.

She was in a heated state, owing (as she told me) to the continual pains; the waters had not yet flowed off; upon examination, the orifice was found a little more opened, so that behind it, though in an oblique position and extremely high, I could distinctly feel the head of the child. During the pains, which the woman experienced with great vehemence, not the least protrusion forwards of the foremost parts of the head was felt; and in that very height, it already appeared to be wedged in. Some examinations performed successively during the pains, convinced me of the existence of a pelvis quite irregular and crippled by rachitis.

The aperture of the uterus being yet so small, that the application of the forceps or other assistance could not be thought

of, I left the patient towards twelve o'clock, with the same directions as I had given in the morning, and the information that I should again visit her at three o'clock, in hopes that during the interval the uterus would open sufficiently to admit the forceps or some other assistance.

Convinced that if even the forceps could be applied, a very difficult labour awaited me, which would in a very high degree exhaust my strength, I requested one of my colleagues, Dr. Spoendly, to attend and support me in this labour. On our arrival after two o'clock in the afternoon, I made an examination during a pain, and found the orifice of the uterus much more dilated than I had found it three hours before, and behind it a small pointed bladder, which in the pain shewed only little tension. Every thing hitherto exhibited by the examination, the inefficiency of the pains both on the chair and bed, the bursting of the bladder during such a pain (on which occasion indeed only a couple of spoonfulls of water escaped, and the head immediately was stopped) determined me, the orifice of the uterus being sufficiently opened, to apply the forceps, notwithstanding I beforehand questioned the possibility of executing my purpose; as after all my examinations, the pelvis in its conjugata measured not above two, or at most two and a half inches in diameter, and the remaining dimensions were in the same proportion. I now attempted to introduce the male lever of my forceps, bent to the axis of the pelvis, on Stein's and Brunninghausen's principles and my own, and, after conquering great obstacles, I succeeded, though in a direction quite oblique. This position of the lever of the forceps already proved how difficult would be the introduction of the second. However, as under circumstances perhaps still more unfavourable, I had succeeded in attempts of this nature, I tried to introduce also the second, but all my efforts proved unsuccessful. The confined entrance into the pelvis did not permit the second lever to slide over the first. After repeated fruitless attempts, my assistant likewise tried the operation but with the same result. The pains which the woman suffered were extremely vehement and excruciating. Meanwhile the antispasmodic remedies were continued, and the patient kept in bed as quiet as possible.

Under these circumstances, and the absolute impossibility of applying the forceps, our consultation turned on two indications, viz. *perforation* and *the cutting of the child*, particularly as its head presented itself; or secondly, *the Cæsarean operation*.

There was against the former indication the very probable impossibility of introducing the instruments requisite for the

perforation, the unavoidable lesion of the parts adjacent, if the introduction were found practicable; and particularly the assertion of the mother, that still she felt the motion and quickness of the child, which likewise was distinctly perceptible to our hands, when laid on the mother's body. We therefore determined on the second, under the conviction that by it the life of one at least might be saved.

The nearest relations who were present were apprized of the determination, and, with their approbation, the woman in labour likewise informed of it. After a few objections, she also soon came to a determination, and we prepared our apparatus and every thing that was necessary. After the injection of a glyster there followed stools and urine.

At five o'clock in the evening the operation was performed in the presence of several professional gentlemen, and in the manner following. I caused the patient to be placed in the position usual in herniotomy, in which the weight of the abdomen presses more against the diaphragm, and ordered her to be properly secured.

Having performed before a similar operation, I was induced to make the incision immediately upon the linea alba, as not a single blood-vessel of any importance had been injured on that occasion. Immediately beneath the navel the skin was pinched up into a fold, both it and the adipous membrane cut through, and the cut continued downwards to the length of from eight to ten inches. The sphere of the uterus, now appearing, extended the fat edges of the incision, so that there appeared a considerable vaulted surface of the womb. There protruded also a portion of small intestine, which, however, was easily kept back by means of linen anointed with fat. In order not to cut through the uterus exactly in a place where the placenta might accidentally be situated, and thus excite a violent bleeding, I chose a somewhat uneven part of its surface, and there made a little incision, so that I could introduce the index of the left hand, to serve as a guide for the progress of the knife. The uterus was then cut open from six to eight inches along the finger. Immediately the child presented itself, together with its membranes, yet without any water. The hæmorrhage till then was a mere nothing. The nearest part of the child was an arm. This, as there was room enough, was disengaged first from the uterus, and after it carefully one part of the child after the other in succession, and last of all the head. Already before the head was freed from the womb, the infant moved its limbs, and on the development of the head, to the greatest joy of the mother and all the attendants, it proved its life by loud

cries, so that not the least thing was required to remove the asphyxia of the infant. The funiculus umbilicalis was severed, and the child entrusted to the waiting woman to be cleansed. In the right side of the womb was found the placenta, which, lying almost quite free, was now taken away. At this period a violent bleeding arose from the bottom of the uterus. The ligature of a blood-vessel, or any other styptical application was not to be thought of under these circumstances; but the blood was quickly absorbed from the uterus by means of a sponge, in order to leave the organ to its own contraction, and to close the wound of the integuments. To this I was the more induced, as a couple of years previously, on dissection, I had found in a person, who died eight days after the operation, the uterus quite contracted, and the labia of the wound in the same almost entirely united. I therefore joined the external teguments with five sutures, covered the wound with lint, and applied some adhesive plasters, confining the whole with a couple of compresses and a broad bandage.

The mother was now transferred to her bed. Neither fainting nor any other accident befel her. On the contrary, her joy and eagerness at seeing her child and having it by her were so powerful, that even whilst dressing the wounds we had much trouble to keep her easy. She was now presented with some good broth, which she ate with great appetite, and the greatest tranquillity was enjoined her. An emulsion with laud. liquid. Syd. and tinct. cinnam. was then prescribed for her.

At ten o'clock in the evening I again paid the patient a visit. She found herself quite tranquil, and complained of nothing but a burning in the wound. During the night, she enjoyed at intervals quiet sleep, which had often been interrupted by the cries of the child, for which reason it was removed to another room. The blood began to flow from the vagina. The urine passed in the natural way. In the morning she took her coffee. The belly appeared considerably protuberant and tense, but not very painful to the touch. The superior part of the dressing, which was soaked with a serous fluid, was removed, and a new one very loosely applied; the internal remedies were continued, externally a friction of ol. anod. with hyoscyamus and laudanum applied, and emollient clysters administered. The second day passed well, and without any material complaints, and also the third. The lochia flowed in due order, the belly grew softer; yet in spite of repeated clysters no stool ensued. The tongue became foul, for which reason, besides the former emulsion, a decoction of tamarinds with salts and manna was given. On account of the exuberant evacua-

tion of serum and the appearance of suppuration with smell, the external dressing was daily renewed; as for the rest, the real dressing was kept on. In the night between the third and fourth day, abundance of flatulencies were developed, followed towards the morning by a stool. The belly was soft, the patient upon the whole well, quiet, and without fever. On the right side of the belly appeared the greatest tension, and the greatest pain was felt. Every thing was continued as before.

On the fourth in the morning, she found herself very well. From the very moment of the operation till now, partly for the sake of observation, partly in case of any immediate help being requisite, one of my assistants had remained with her. Towards noon I was sent for and requested to repair as quickly as possible to the patient, who was apparently dying. The better I had left the patient in the morning, the more unexpected and strange was this message to me.

On my arrival I indeed found the patient in a very indifferent situation. She experienced violent convulsive spasms, particularly in her head. She had a staring look, cold extremities, cold sweat on her brow: the urine had been discharged involuntarily. She recollects nobody, could neither speak nor swallow; her breath was much oppressed, the pulse low and contracted; her complexion saturnine: yet the abdomen was not much collapsed, which must have been the case had gangrene existed. None of the persons present were aware of the cause that in such a promising prognosis had occasioned a change so sudden and so distressing to the physician. She had still taken some soup, and then said, she felt very squeamish. Under these circumstances, and the patient not being able to swallow, I had no means left but to make her smell volatile essences and apply antispasmodic frictions, especially about the neck, to remove the convulsions and spasms, and restore the faculty of swallowing. This was effected after the space of a couple of hours, when an analeptic mixture was given to her every hour, and every two hours some musk. Clysters and external frictions, especially round the neck, were continued. Towards evening, the evil, rather than increase, seemed to abate. Her speech returned, her warmth became equal, the skin moist, the pulse softer. Her weakness was very great. Being almost fully convinced that too great exertion in speaking and too great joy, in short, that passions had brought on this alteration, I prohibited all visits, and left the patient without any other company but two persons to watch her. The night was passed with varying symptoms, yet more tranquilly, and without fever or other accidents. The clysters took effect, recollection returned, the belly became rather more

distended and painful. On my visit in the morning on the fifth day, she called out to me, "I have suffered severely; but at present I find myself very well." Most of the symptoms, indeed, had ceased, so that the highest state of quietude was once more to be recommended. The belly was soft; on the application of clysters there followed evacuations; the natural complexion and warmth returned; she felt much ease and comfort from changing beds. As there appeared a violent suppuration or rather a copious oozing of a strong-smelling serum, the dressing, all but the ligatures, was taken off, and put on again loosely in the same manner. The ligatures all were in the best order, and duly kept the labia of the wounds together. The interior treatment was not at all changed. From this time the patient daily improved; every day the external dressing was renewed. The belly collapsed visibly; the uterus contracted more and more; the lochia were discharged as they ought; the milk appeared in the breasts, though but in a small quantity, so that this concern was entirely left to nature.

On the tenth day after the operation the ligatures began to form small pustules and thence give way. Two of them, which were the least tied, were removed, and the three remaining ones were left to hold as well as they could. The internal remedies were still continued, and especially the clysters. Four or five days later the three other ligatures were likewise taken off, and the wound treated as a simple sore, and kept together and supported by adhesive plasters only. Good fare, wine, &c. aided her strength.

The same treatment was continued till the 20th of March; no disastrous accident occurred. All the functions of the body went on in the best order. The wound was cleaned and healed considerably from day to day. The patient remained without all medicines till the 27th, when on account of the uncleanliness of the primæ viæ, some purging medicine was thought proper for a couple of days. The patient now daily spent a few hours out of bed, began to work, mind her child, and in short, except from the sore, which was not very large, suffered not the least inconvenience. In the seventh week after the operation, the menses reappeared, though somewhat irregularly; since that they have occurred at due periods. From day to day her strength improved, so that in the eighth week she transacted most of her domestic concerns, and never more was confined to her bed during the day. In the twelfth week she paid me a visit in the best health, at my house, together with her admirably handsome and stout babe.

It appears surprising, that in the middle of this wound a little spot, not exceeding two or three lines in length and breadth,

in spite of all the remedies applied for the purpose, will not close ; and when thought to be healed up will again open, yet without any detriment to the mother. The child, now eight months old, may likewise be exhibited as a pattern of health, strength, and beauty.

J. J. LOCHER, M. D. *Town-physician.*

Zurich, October 20th, 1817.

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*Cases of the Effects of Mercury on the Heart.* By JOHN ASTBURY, M. D.

[From the Edinburgh Medical and Surgical Journal.]

MR. ——, aged 55, of a strong muscular appearance, but with a weak stomach and bowels, consulted me on December 19th, 1814, on account of a cold œdematosus swelling in the right leg and thigh, the consequence of a diseased lymphatic gland in the groin. Some mild mercurial ointment, combined with soft soap, and camphor, was directed to be rubbed upon the thigh of the affected side, and upon the diseased gland, morning and evening. On December 29th, his son came to me in the morning, and informed me, that his father was much weaker, and worse, than when I last saw him. On my visiting him, I found him raised up in bed, with his mouth open, gasping for breath, his breathing very laborious. He complained of great uneasiness and anxiety about the praecordia ; he was in a profuse perspiration ; there was a strong mercurial fetor in his breath ; his pulse fluttering, feeble, and intermitting, so that it could not be counted. He got up to the night stool in my presence, and his strength was so much depressed, that it was with very great difficulty he could be got into bed again. He had a slight pain in his side, with slight cough, and trifling bloody expectoration ; his tongue was white and moist. As the action of the heart was so feeble and irregular, and his strength so much depressed, I gave him wine very freely, with the best effects ; I likewise directed a strong solution of magnes. sulph. to open the bowels copiously. The next morning I found his pulse more distinct, though still very intermitting. He had had three copious stools ; his breathing was less laborious ; the anxiety about the heart was diminished ; his strength was improved ; the perspiration was still very profuse ; he had slept three hours, and was in every respect respect relieved. The wine and solution of magnes. sulph. were continued for several days. As the mercurial fetor in his

breath, and the effects of the mercury declined, the pulse became more regular and full, the perspiration greatly diminished, his strength improved, but the bloody expectoration and cough, with slight pain in his head, increased. The wine was therefore omitted; saline medicines, with small doses of nitre, and a blister to the side, were directed; the swelling in the leg and thigh, and in the diseased lymphatic gland, gradually subsided, and my patient recovered his usual health.

On the 1st of January 1815, I was consulted on a case, where the patient had been rubbing in mercury for a venereal complaint for some weeks. He stood in the street in a current of air, on December 31st, in thin shoes, and fine cotton stockings, for a considerable time, and was attacked in the evening, with great anxiety about the praecordia; alarming and sudden depression of strength; a numbness, and partial loss of motion in his hands and feet; great hurry of spirits; a profuse perspiration; his pulse was fluttering and undulating; his tongue was dry. This was the history of the complaint I received from my very ingenious and well informed friend, Dr. Northen of Newcastle, who attended him on the night of December 31st. I found him on the morning of January 1st in a profuse perspiration; his pulse full and strong, but very intermitting, about 60; his breathing tolerably free; he complained of an uneasy sensation in the region of the heart; his countenance was composed, his mind clear and collected; there was a partial loss of motion in his hands and feet; his strength was much depressed; he complained of great numbness in his hands and feet; his tongue was dry and brown in the middle, though he did not complain of any particular thirst. Some purgative medicines had been directed, which were continued, and some doses of sulph. lot. were ordered. In the night of January 4th a complete paralysis of the hands and feet came on, which, in the afternoon of the 5th, affected all his limbs, and extended to the heart, and he died in the night of January 5th.

Both these cases were evidently of the same nature as those described by Mr. Pearson, in his reports of cases in the Lock Hospital, under the name of the Mercurial Erethismus, arising from the poison of mercury affecting the heart.

It appears from these two cases, and from other cases recorded by Mr. Pearson, that, in some instances, mercury affects the heart with partial, and in other cases with complete paralysis, the same as the extremities, and frequently produces sudden death. Probably the energy and life which exist in the heart, may enable that organ to recover from a partial paralysis, (a crippled state of action,) in a more speedy manner than the

extremities do, where the circulation is more languid. In both these cases, the application of, (or exposure to cold air,) seemed to direct the action of the mercury to the heart, and should make us cautious how we expose patients when under the influence of mercury to cold air. In the first case, the patient went out every day into the air, and the cough, slight pain in the side, and trifling bloody expectoration, were evidently the effects of exposure to cold air; for had these symptoms arisen from the irritation of mercury, the cough, bloody expectoration, &c. would have subsided, as the effects of the mercury declined; on the contrary, the cough, bloody expectoration, and slight pain in the side, increased, as the effects of the mercury were diminished.

I observe Mr. Pearson recommends a generous diet, and free exposure to cool dry air, and the patient to sit with his windows open in cool weather in these cases. These were the first cases I ever met with of the same nature, and as both were attended with profuse perspiration, (and if there had been no profuse perspiration,) I should think it a dangerous experiment, with these two examples before us, to expose patients under similar circumstances to cold air. If I were to meet with another similar case, I should treat it with wine, as the best cordial calculated to restore the regular action of the heart, and give sufficient doses of the solution of magnes. sulph. to diminish the effects of the mercury in the habit, and keep the patient quiet in a temperate, but not cold air. There was no ptyalism in either case. I was not sure, whether the profuse perspiration was not an effect of nature to relieve the constitution from the effects of the poison; but I did not observe any salutary effects from it in either case; neither was the cough or bloody expectoration at all relieved by it.

Barlaston, April 14th, 1818.

*Effects of Venesection in certain forms of Dropsy.* By  
ADAM HUNTER, M. D. Fellow of the Royal College of  
Surgeons, Edinburgh.

[From the Edinburgh Medical and Surgical Journal.]

**C.** O. æt. 42, married.—About the beginning of June, I was requested to see this patient, who, having accidentally received a blow on an anasarcaous leg, was alarmed, from the appearances it had assumed, it would prove of serious conse-

quence. On examination, I found situated about the middle of the right leg, which was prodigiously swelled, the mark of a blow, surrounded for the space of three or four inches by inflammation of an erythematic character, attended with a sensation of tension, and burning pain, and studded in various parts with minute vesications. In the immediate vicinity of the injury were distinctly perceptible the various colours of livid blue and green, of impending gangrene, and not those arising from ecchymosis in its progressive stages of absorption. The cuticle of the whole limb, except the part described, was of a deadly pale waxy hue, with a polished glistening surface, and in some places, beset with fissures, which gave vent to a serous oozing. The left leg was equally swelled, but without the gloss of the right :—the arms, hands, and face, shewed the same marks of general dropsical diathesis. The abdomen was very tumid, but seemingly more from the effusion into the cellular membrane of the *parietes*, than accumulation in the cavity of the peritoneum. Pulse small and weak, but the surface at the wrist was so much raised above the artery by the effusion, that it could be with difficulty felt. Some thirst; bowels constive ; urine very scanty, thick and muddy.

About fourteen years ago, became asthmatic from exposure to cold, which has continued to recur in paroxysms ever since. Five years ago, the menstrual discharge did not take place on weaning the youngest child. Soon after she felt her general health much out of order, and swellings began to appear in her limbs, slightly and evanescent at first, but long since become extensive and permanent. The menses had hitherto continued very irregular. Had used a great variety of means, and applied to many medical men, but had experienced little or no benefit.

The remedies prescribed at the first visit, and continued for a fortnight with little apparent benefit, were combinations of the various diuretics ; dusting the limb with an absorbent powder, and placing it in a horizontal position. Dissatisfied with the progress of the case, and at this time re-perusing Dr. Abercrombie's paper with care, and studying the cases, authorities, and inferences, I was led, but not without numerous ill-defined apprehensions, to adopt the same practice, and abstracted about six ounces of blood. The evacuation was borne without any unpleasant occurrence, and next morning the patient expressed herself relieved. Two days afterwards, the quantity of urine was increased, and the swelling diminished. The diuretics appeared now to be affecting the kidneys, and the improvement was progressive for ten days, when the quantity of urine again diminished, and became muddy, and the swelling

resumed their former magnitude. For three or four days these unfavourable changes went on without amelioration; when the patient told me it was about the period at which the menstrual discharge should have appeared, but had not. No longer dreading the effect of depletion, I now took xiv. ounces of blood from the arm, gave her two or three doses of gamboge, and cream of tartar, and then resumed the use of the diuretics. The improvement from this time was singularly rapid; the urine became clear; was evacuated in quantities of lb. ii. and lb. iij. daily; and the swellings decreased, until, in the woman's own words, she had pined away to nothing. It was at this stage of the case that Dr. Abercrombie accompanied me to see the case, and was so much pleased with the result, that he requested me to give notice of the case through the medium of your excellent Journal. I was, however, anxious to watch it till a more distant period, and postponed it till now, when, from the occurrence of an acute attack of pneumonia, in the same individual, which required the evacuation of ix. ounces of blood within 48 hours, to subdue the pulmonic symptoms, I can no longer resist Dr. Abercrombie's wish, as from the occurrence of this acute disease, and the activity of the measures that were found necessary to conquer it, the case has become one of the most satisfactory description in support of the practice, and points out, that, with due precautions, venesection may be adopted in dropsical cases of the most unpromising character, with prospect of ultimate advantage. Three weeks have now elapsed since she was convalescent from the pneumonic attack, and not the slightest appearance of dropsical effusion exists.

Another case of an equally interesting nature occurred to me a short time previous to the one just detailed, in the person of the patient labouring under the affection of the heart and arterial system, which forms the subject of the first case in the valuable Clinical Reports just published by yourself.

After leaving the hospital, the patient again came under my care, when the same means, viz. occasional blood-letting, digitalis, &c. were resorted to, and attended only with the same temporary alleviation. During the farther treatment of the case, the swelling of the limbs increased to an enormous extent, and the skin, being put completely on the stretch, possessed a smooth glistening polished surface, and was so tense as scarcely to yield to the pressure of the finger. In this state, having procured large shoes, and cut them up in front, he imprudently forced them on his feet, and walked about for a length of time, and when he came home, he found that the skin of the fore part of the left foot was abraded. A few days after this, at

one of my regular weekly visits, I found situated on the front of the foot a foul sloughing sore, with dark edges, with erysipelatous inflammation, covering the foot, and extending midway up the leg. For two nights he had suffered much more severely than at any former period, from pain in his chest, and terrific dreams, when he happened to fall asleep in the recumbent posture. The secretion of urine had been diminished for some days, and the digitalis, having disagreed with the stomach, was discontinued.

His situation now appeared critical, and I felt myself placed in a dilemma from which I knew not how to escape. For his chest affection, experience had taught me that venesection was the *unicum remedium*, but from adopting it I was deterred by the state of the foot, for the effusion did not appear to me at any period to depend on obstruction existing to the free transmission of the blood, the pulse being always *full and regular*, the countenance *clear*, and the lips of a *bright vermillion tinge*, till now, when depletion had rendered them pale, but without lividity, states which, I conceive, cannot be reconciled with organic disease diminishing any of the apertures of the heart; but the effusion seemed actually to depend on the extent to which the depletion had been carried, the patient having lost, in a few months, not less than 250 ounces of blood, and the last evacuation shewing that fluid to be in a very watery condition. As he was himself aware of the relief that bleeding afforded, and as his chest affection had become extremely urgent, he was anxious to have some blood abstracted, which I was induced to comply with, and took away xvi. ounces with immediate relief. A poultice was ordered for the sore, and a horizontal position for the limb. Dreading the consequences of the loss of blood upon the state of the sore, I made an early visit next morning, and found he had passed a much better night, complained less of tension of the limb, and of the burning pain of the sore. For several days the sore retained a foul sloughing appearance, but did not extend in circumference. The swellings of the limbs began evidently to diminish, with the progress of which the improvement in the state of the sore kept pace, and in three weeks from the date of the bleeding, the sore was healed, and the swelling so much reduced, as to enable him to put on his own shoes. Shortly after this I lost sight of him, till about a month ago, when I saw him walking about the street in idle company.

I am, Dear Sir, yours very sincerely.

*Experiments in favour of a New Substance for Tying Arteries, and for Suture, with Practical Observations.* By JOSEPH M'SWEENEY, M. D.

[From the Edinburgh Medical and Surgical Journal.]

THE valuable work of Dr. Jones has acquainted the medical world with the ligature best adapted for tying arteries. But modern surgery has gone even a step farther, in endeavouring to use a substance of an animal nature, over which a wound might heal. With this intent minute silk ligatures have been tried, and in some cases, it appears, with success. The paper in the Medico-Chirurgical Transactions on this subject is not very encouraging. The experiments of Mr. Cross in the Medical Repository, are not in favour of minute silk ligatures for the purpose. Mr. Astley Cooper has recently used catgut in an operation for popliteal aneurism; the wound healed over it, and the patient had a rapid recovery. Fortunately there is a substance of an animal nature, possessed of all the properties recommended by the Doctor, over which a wound will heal. This is silk-worm gut, which is imported into England for the purposes of angling, and is to be found in the shops that supply fishing-tackle. It is round, smooth, amazingly strong; it is only as thick as horse-hair, thus adapted for cutting the internal coat of an artery; and it admits of being firmly knotted when moistened.

After having read the case of ligature on the aorta, by Mr. Astley Cooper, I determined to try whether a wound would heal over this substance, and also to ascertain the effect of leaving some of it in the abdomen.

Experiment 1.—A large incision was made into the abdomen of a dog, and a small bundle of silk-worm gut was left there. Then with a curved needle and a single thread of it, I sewed up the wound into the abdomen closely, taking care not to sew up the wound in the integuments. The close stiches afforded an opportunity of seeing whether this substance would cause great irritation. The lips of the wound in the integuments were brought together by sticking-plaster, and the animal was confined to a horizontal position. The sticking plaster was found not of great service. The wound healed kindly, and on the 17th day it was cicatrized. I had not an opportunity of examining farther.

Experiment 2.—An incision about two inches and a half in length was made into the abdomen of a rabbit; a small bundle

made up of twelve inches of silk-worm gut, was introduced. The lips of the wound in the integuments were brought together by the twisted suture over the silk-worm gut, with which I had closely stiched up the wound into the abdomen. The pins were taken out on the 4th day, and the wound was found united. Thirty-two days after the experiment the rabbit was killed, and the bundle of silk-worm gut was found attached to the omentum, surrounded by a membrane that rendered it smooth. The greater part of it was so enveloped with adipose substance, that it appeared to be a mass of this nature.

Experiment 3.—An incision about two inches and a half in length was made into the abdomen of a rabbit. The same quantity of silk-worm gut, coiled up, was left there as in the former experiment. The wound into the abdomen was closely sewn up with silk-worm gut, and the lips of the wound in the integuments were brought together by the twisted suture. The pins were removed on the 3d day, and the wound was found united. Twenty-two days after the experiment the rabbit was killed; the bundle of silk-worm gut was found attached to the colon, surrounded by a membrane, which rendered it so smooth, that it appeared to be a tumour attached to the colon.

Experiment 4.—A small bundle of silk-worm gut was introduced into the abdomen of a rabbit, as in the former experiments. The abdomen was examined after a few days; the silk-worm gut was found attached to the peritoneum, and inclosed in a cyst by adhesions.

Experiment 5.—I made an incision about two inches and a half in length into the abdomen of a rabbit. The intestines were pushed up, so that I had a good view of the psoas muscle. With a curved needle, armed with a single thread of silk-worm gut, I inclosed part of the psoas muscle, in a ligature which was fastened with a double knot. I cut off the ends of the ligature with a small nippers, leaving two peduncles to ascertain what irritation would arise from them. The wound into the abdomen was sewn up with silk-worm gut, and the wound of the integuments was closed by the twisted suture as before. The pins were removed on the third day, and the wound was found united. The rabbit was killed a month after the experiment. The ligature was completely covered over with muscular fibre, one peduncle projected, and had evidently irritated the neighbouring mesocolon, which was red, but not to a great distance. The colon at this point was slightly red. This did not appear to interfere with the functions of the animal; it had passed feces on that day. The other peduncle had lain more

horizontally, and consequently projected less; its point was a little beyond the surface of the muscle.

Experiment 6.—An incision nearly three inches long was made into the abdomen of a rabbit. The intestines were pushed up, and part of the psoas muscle was inclosed in a ligature, fastened by a double knot. The ends were cut off with a nippers, as short as could be conveniently done. The wound into the abdomen was closely sewn up with silk-worm gut, and the wound in the integuments was closed by the twisted suture. The rabbit was killed on the sixth day. The ligature was covered with muscular fibre, though as yet but thinly. One small peduncle projected a little beyond the surface of the muscle. There was no inflammation. In performing these experiments, the importance of keeping the animals fasting was evident. The intestines did not give a great deal of trouble, and on account of the abdomen being flaccid, I was enabled to make the incision in such a way, that on it probably a great deal of the success depended. The skin was drawn to one side of the abdomen, and the incision was made to the requisite extent down to the linea alba. The cut was then continued through the linea alba into the abdomen. By this means, when the skin was allowed to resume its former situation, the wound through it did not correspond with the wound into the abdomen. All the incisions were in the linea alba, or at the left side of it. In every experiment except the fourth, the wound into the abdomen was closely stitched up with silk-worm gut, and in every instance the wound healed, and it was found embedded in the parts that grew round it. The silk-worm gut, both used for suture, and left in the abdomen, was always found unchanged. In large wounds of the abdomen, where it will be judged necessary to use suture, silk-worm gut may be found useful for this purpose; particularly if we take care not to pierce the skin with the needle, but to bring the lips of the wound in the integuments close together, that they might unite over the suture underneath. Silk-worm gut is well adapted for suture, on account of its strength, fineness, and great smoothness. The danger of causing irritation with the knot which fastens the thread to the needle, can be obviated by using a needle with a hole at the bottom of the eye, through which hole the thread may be drawn, and a knot fastened at the end, so large as not to repass. In this way the knot will lie in the eye of the needle, and will not tear the flesh in the passing. A needle of this kind, armed with very fine silk-worm gut, may be of particular service in wounds of the intestines.

There can be little doubt that catgut may be left in the abdomen with the same impunity as silk-worm gut. It may be asked which ought to be left there, if it were necessary to tie the aorta again. Although silk-worm gut is eminently possessed of all the properties recommended by Dr. Jones, perhaps, in this situation, catgut may be preferable. The objection to silk-worm gut as a ligature for the aorta, arises from the sharpness of the points of the peduncles that project from the knot when the ends of the ligature are cut short. Whether the ends could conveniently in every case be cut off so short as not to cause subsequent irritation, I dare not determine. If they are to be cut off short, three or four knots ought to be put on the ligature instead of the double one. The fineness of this substance will admit of them without causing a great bulk. For cutting off the ends of a ligature of catgut, or silk-worm gut, I think a fine nippers, guided by the fingers, will be found convenient. It will obviate the danger of using a knife or scissors among the intestines. Silk-worm gut promises to be of service for tying arteries in amputation, where it is a great consequence to heal the stump as quickly as possible, and where the life of the patient frequently depends on avoiding copious suppuration. In purchasing silk-worm gut, care should be taken not to get a thicker substance than resembles it, called Indian Weed. The curled ends of a thread of silk-worm gut should be cut off as useless. It should be well steeped in tepid water immediately before using it, and should also be repeatedly wound round a body such as a probe, to take off its elasticity, that it may be more easily knotted.

Paris, September 20, 1818.

## REVIEW.

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*History and description of an Epidemic Fever, commonly called Spotted Fever, which prevailed at Gardiner, Maine, in the Spring of 1814. By E. HALE, jr. M.D. M.M.S.S. pp. 246. Boston, Wells & Lilly, 1818.*

**E**PIDEMIC diseases of perhaps every kind are liable to variations in their character, severity, danger, and duration, at different periods and places of their occurrence. The most common of them, alter their appearance and tendency so much at different times, that the physician, though he be ever so well satisfied of the name of the disease, is compelled to regulate his practice by the symptoms which are present, and frequently by the experience derived from his first cases. Attempts to generalize the character of a disease of this sort, and to establish a universal mode of treatment, must from this cause be ineffectual. An epidemic occurring several years after one of its kind, may agree with it in many leading characteristics, yet so far differ as to require an opposite mode of treatment. At the same time also that it disagrees with one which is most prominent in our recollection, it may closely resemble another which is more remote or less thought of. Two epidemics of the same name may also greatly differ in regard to the degree in which they are under the control of medicine. A prevailing disease may at one time have so little tendency to mortality that patients shall recover under every kind of treatment, which is not in itself destructive; while at other times a large number of the sick will die under any variety of medical treatment. We are then most obliged to those medical writers, who, in their accounts of epidemics confine themselves to the history of what they themselves have seen and known; and while they present a candid statement of their cases, the treatment and results; leave it to practitioners to form their own application.

Dr. Hale in his history of the epidemic which appeared in the town of his residence in 1814, has given a careful and exact report of his clinical experience with the disease. This work, when compared with others which bear a similar title, is distinguished by the minuteness and fidelity with which the author has recorded his observations, and the industry with which he has extended them during a course of active and laborious professional duty. As a perspicuous and philosophic history of a disease it will be a valuable accession to the library of the medical practitioner. The epidemic at Gardiner appears to have been severe in its character, though less formidable than the spotted fever so called, of some other districts and periods. In this instance a treatment by diaphoretics, stimulants and tonics, proved efficacious in the hands of Dr. Hale. A similar treatment we are told, has been found beneficial elsewhere, though in the forms which this fever sometimes assumes it is not only inadequate to the cure, but even pernicious. We insert a few cases from the author's book to afford some idea of the symptoms and treatment of the Gardiner epidemic.

## CASE I.

*February 11th, 1814.* A. L. is an unmarried woman, aged about 25 years. Her health has usually been good; until within a few months past it has been less vigorous than formerly. I was first called to-day. She was seized with pain in the bowels and diarrhoea more than a week ago, but has been better since the first attack. Her diarrhoea, however, continued, and she has, of her own accord, taken a dose of sulphate of soda, by which her strength has been very much reduced. She has kept her bed for the last three or four days. She now complains of great pain in the head and extreme dizziness; constant vomiting; strength prostrate; great numbness of the extremities, skin has a puffy, œdematosus feeling. Purple spots appear occasionally on her limbs. Her pulse is so feeble and quick, that it is counted with difficulty; tongue covered with a dark coat. She was directed to take the powder of ipecacuanha, opium and camphor, which is described in the preceding chapter, every four hours, and between the time of taking it, to drink a wine-glass full of the fermented decoction of cinchona. Four drops of arseniate of potass, with four of tincture of opium, were ordered to be given each time in the decoction. Small quantities of brandy and of strong soup were directed to be given in the intervals.

*February 12th.* In the morning. Every symptom is worse. Only a trembling of the pulse can be perceived at the wrist. The stomach has rejected every thing she has taken. Omit the powders, and the decoction. Rx Lavend. Ol. Vol. gt. iv. Tinct. Opii. gt. v. every hour, in a tea spoonful of warm brandy and water. This pre-

paration gives a very grateful sensation to the stomach. Give frequently a little brandy, spiced and warmed. Apply spiritous fomentations to the region of the stomach.

" Afternoon. Vomiting less urgent. Re-commence the diaphoretic powders, and decoction of cinchona, as directed yesterday.

" 13th. Symptoms somewhat mitigated; but the stomach still rejects the decoction of cinchona. Substitute for it, a strong infusion of quassia: of which give a table spoonful every hour, except when the powders are administered, which are to be continued as before. As she has been two days costive, an emollient enema was ordered, which produced a free stool of a natural appearance.

" 14th. Rather better. Continue the powders and the infusion of quassia. The enema was repeated, and with the same result as yesterday. Rx Tinct. Cinchon. compos. 3*i.* every four hours.

" 15th. Still better. Continue the medicines. A moderate dose of rhubarb was ordered to obviate costiveness.

" From this time her health gradually improved until in a fortnight she was able to sit up half an hour at a time, and to eat pretty well. Substantially the same course of medicine was pursued, until she was perfectly recovered. In the course of her convalescence, she was affected with a pain, apparently rheumatic, in her left arm, which was readily removed by frictions with compound tincture of soap. Her health was better after her sickness than it had been for a few months before."

#### CASE II.

" Feb. 24th.—Mrs. S. a married woman aged about 30, of a vigorous constitution, and good general health. She complains of great pain in the head, and dizziness, which have been so severe, as to confine her to her bed for the last two or three days; sickness at the stomach; thirst; numbness of the limbs. Purple spots occasionally appear on the skin. Her tongue is much coated; pulse quick, but not remarkably feeble. These symptoms have been gradually making their appearance, and increasing for a week. She was ordered the Pul. Ipecac. &c. every four hours; at bed time to take Tinct. Opii Camph. 3*i.*; to drink warm aromatic decoctions as her thirst required, and to take soup for food.

" Feb. 25th. Her headach and dizziness are diminished, as well as her thirst; numbness and petechiae gone. Continue the diaphoretic powders; and between each dose, take a wine-glass-full of the fermented decoction of cinchona. As she is costive, take a portion of powdered rhubarb. I did not see her again. She recovered in a few days."

#### CASE III.

" Feb. 26th.—J. D. a boy eleven years old, was seized suddenly yesterday morning, with violent pain in the head and dizziness, nau-

sea and vomiting. During the night he was in a perfect delirium. This morning the vomiting has stopped, and he is rational. He still complains of great pain and dizziness of the head; pain in the back and limbs; a slight numbness of the extremities; thirst for warm drinks; sickness, and a feeling of depression at the stomach. His skin is dry; pulse quick, and tolerably strong, and his tongue much coated. The bowels are not apparently disordered. He was ordered the powder of Ipecac. &c. every four hours, to take warm aromatic drinks; and if these should not be sufficient to produce a diaphoresis, to make use of external sudorifics. If restless at night, he is to take a full dose of camphorated tincture of opium. Nourish with good soup.

" 27th.—He has rested well through the night. The dizziness and pain in the head are much less severe than yesterday; vomiting nearly ceased; thirst and numbness diminished. Continue the Pul. Ipecac. &c. Take the fermented decoction of Cinchona between each powder.

" 28th.—Much better; every symptom relieved; has set up more than an hour. His appetite has returned; and he complains of nothing but debility. Continue a diaphoretic powder, night and morning; and the fermented decoction, and a little brandy occasionally. I visited him no more. In nine days after this time he attended school in good health."

#### CASE VI.

" Feb. 26th.—Mrs. H. about forty years old, has lately been considerably exhausted by attending upon a sick child. She was violently attacked to-day with severe pain in the head and dizziness; pain in the back and limbs; occasional vomiting; thirst for warm drinks. Her pulse is quick and hard; tongue coated; skin dry. She complains of a severe and acute pain in the thorax under the right breast, which occasions difficulty of breathing. She has been for several days subject to a cough, accompanied by a free expectoration, both of which continue. Apply a blister, as nearly as possible, over the seat of the pain in the chest. Rx Pul. Ipecac. &c. every four hours; and at bed time, Tinct. Opii. Cam. 3*i.*

" 27th.—Had rested pretty well, during the night. The pain in the chest is somewhat mitigated, particularly while the body is at rest, but is still severe upon motion. Pulse quick, but feeble; vomiting rather less urgent. Continue the Pul. Ipecac. &c. and to each powder add one grain of Sub-muriate of mercury. As she is costive, give Pil. Aloes and Rhei as much as is sufficient to move the bowels. N. B. These pills are made of equal parts of aloes, rhubarb, and soap.

" 28th.—Has passed a quiet night; and every symptom is relieved. The pills produced a moderate dejection. Continue Pul. Antimon.\*

\* The antimonial powder in this composition was used as a substitute for ipecacuanha, with camphor and opium.

&c. as she has taken the powder of Ipecac. &c. and in each interval take a wine-glass-full of the fermented decoction of cinchona.

" *March 1st.*—Has had a good night, and is better; pain in the thorax mostly gone; vomiting ceased; has no pain in the head, nor dizziness; skin moist; expectorates freely; bowels regular; likes the fermented decoction much. Continue it. Rx Pul. Ipecac. &c. every six hours.

" *2d.*—Better in every respect; bowels regular; expectoration free; pulse of natural frequency, but feeble; vomiting and thirst gone; skin natural in its appearance; has but very little appetite for food. Rx Pul. Ipecac. &c. night and morning; Tinct. Cinchon. Compos. 3*i.* every four or five hours.

" *3d.*—Is nearly recovered; feels pretty well, except that she is feeble; has some appetite for food; sleeps well; pulse pretty good; bowels regular; tongue moist, coat nearly separated. Continue the Tinct. Cinchon. Compos. If at any time a paroxysm of fever should return, take a powder of Ipecac. &c.

" She recovered without any further attendance. In the course of her convalescence she was affected with a pain apparently rheumatic, in her shoulder, which was speedily removed by friction with Ol. Ammoniatum."

#### CASE VII.

" *Feb. 27th.*—Mr. W. a vigorous healthy man, about 30 years old. He has walked, or rather skated upon the ice, two miles to-day to attend meeting, attended two services, and returned in the same manner. He began to feel rather ill before he reached home; and soon after, was seized with extreme pain in the head and dizziness; pain in the back and limbs; rigors, succeeded by heat and thirst; and some pain in the upper part of the thorax, nearly under the right clavicle. His tongue is dry; skin dry, and hot to the touch; pulse quick, full, and hard. Rx Tart. Antim. gr. ii. to be repeated twice after intervals of fifteen minutes, unless vomiting is sooner produced. As soon as the vomiting ceases, give Tinct. Opii Cam. 3*i.*; and in an hour or two after, commence giving the Pul. Ipecac. &c. every four hours; to each dose of which is added Sub-mur. Hyd. gr. i. At bed time, if he is restless, give him a drachm of camphorated tincture of opium. Nourish with soup. Apply external sudorifics, and give warm drinks, until a diaphoresis appears.

" *28th.*—The emetic operated favorably, and gave some relief. The pain in the thorax is increased, that in the head somewhat diminished; other symptoms much as before; bowels regular. Apply a blister over the seat of the pain in the chest. Continue the Pul. Antimon. &c. every four hours.

*March 1st.*—Rested pretty well through the night. In the morning his skin was moist, and he was nearly free from pain. But I was not able to visit him so early as I had intended, and he became destitute of medicine; in consequence of which, his skin grew dry;

his pain in the head and dizziness returned, and became extremely severe. His tongue is coated and dry; pulse quick, and much more feeble. He is very thirsty. Rx Pul. Ipecac. &c. every four hours; in the intervals, take the fermented decoction of cinchona. Use warm aromatic drinks, as freely as the thirst requires, and apply external sudorifics.

" 2d.—Rested well last night, and feels better to-day; feels more strength and less pain; pulse more nearly natural; skin keeps moist; is less thirsty; tongue coated as much as ever. Continue the medicines; take a little brandy or wine occasionally.

" 3d.—Is still rather better; rested well last night; has very little pain; takes soup with relish; brandy does not suit him; pulse good; tongue darker; skin continues moist; wishes for cider, which he is allowed to take freely. Continue the medicines.

" 4th.—Worse. He felt very well yesterday afternoon and evening; but had too much company, with whom he talked very freely, as well as in the night with his attendant. He slept tolerably well, most of the night; but had several paroxysms of coughing. When he waked this morning, he was perfectly hoarse, and continued so much so, that he can scarcely speak, except in a whisper. His respiration is laborious; tongue dry and black; pulse more feeble; skin moist; has a diarrhoea, which is probably occasioned by the cider, of which he has drinked very freely. Substitute wine. Take ten drops of tincture of opium after every superfluous stool. Continue the decoction of cinchona, and the Pul. Ipecac. &c.

" 5th.—Rested pretty well; pulse better; tongue more moist, but as black as ever; is less thirsty; feels more strength; takes soup with relish. His voice is entirely gone, so that he can only speak in a whisper. Continue the medicines, and give brandy or wine frequently.

" 6th.—Recovering; rested well; pulse preternaturally slow; tongue still black; skin moist. Rx Tinct. Cinchon. Compos. 3*i.* every four hours; the Pul. Ipecac. &c. every six hours. Continue the wine and soup.

" 7th.—Expectorates freely; cough less troublesome; rests well; pulse slow, and tolerably full; voice still gone. Continue the medicines.

" 8th.—Still gaining; sleeps well; appetite for food good; pulse very slow; walked into an adjoining room this morning. Continue the medicines.

" 9th.—Sits up more than an hour at a time, and can walk from one room to another, several times in succession, without fatigue; tongue still coated in the middle; is still unable to speak but in a whisper; pulse forty in a minute, tolerably strong; skin natural. Omit the Pul. Ipecac. &c. unless the skin at any time becomes dry. Continue the Tinct. Cinchon. Compos. frequently.

" 10th.—Still better; somewhat troubled with a diarrhoea; pulse natural. After every stool until the diarrhoea is checked, take ten drops of tincture of opium. Continue the tincture of cinchona.

" 11th.—Sleeps well ; ate a piece of beef steak this morning with good relish ; has sat up several hours at a time. He has not in any degree recovered his voice. Continue the tincture of cinchona. In a few days after this, his voice began to return, and he recovered perfectly well."

## CASE XXII.

" *May 16th.*—W. J. is about thirty-five years old, of a very robust habit. His business, which is the manufacture of boards, has for many years exposed him to great fatigue, to labour in the water, and to the vicissitudes of the weather, by which his constitution has become exceedingly hardy. For several days past his exposure has been much greater than usual, in consequence of a flood, which threatened the destruction of his property. He has laboured almost incessantly night and day, frequently in the water, and almost constantly with his clothes wet by the rain, which has been very abundant ; at the same time that he has been subject to extreme anxiety of mind, in apprehension of the ruin which seemed to await him. During this period, he has two or three times been considerably ill, with pain in the head and back, and other symptoms of fever, for which he has taken measures to excite perspiration ; and being relieved by it, has then gone out and exposed himself as before.

" Yesterday his exertions and anxiety were increased to the utmost extent. He was seen with his coat off, standing in the water, up to his waist, with the sweat streaming from his face, while the rain was still falling, using every effort to save his property, which the flood was carrying away. Soon after this, he returned home much exhausted, and in great pain and general distress. But something else occurring to him to be done, he again went out in the rain, upon the river, to secure his timber. While he was out, he was seized with vomiting ; which, however, did not deter him from proceeding to accomplish his object. Immediately after his return, he put his feet into warm water, and went to bed. He was in great pain ; chilly ; skin hot and dry ; thirsty, &c. He complained also of a peculiar pain in his throat, which was very severe. He slept very little, if any, through the night. I was not called until this morning.

" Measures had been taken by the family, to procure a diaphoresis, by giving him warm drinks, and applying external sudorifics ; and had been successful so as to give him considerable relief. When I saw him, he felt that he was very sick, but without any very specific complaints, except an occasional vomiting. The pain in his throat had left him, with the other pains, when the diaphoresis appeared. His pulse was quick, and feeble ; tongue dry, and coated.

" His mind was still very far from being in a state of quietness or composure. In addition to his apprehension for the loss of his property by the flood, which still continued, he now recollects that his accounts were in a careless state ; so that if he should die (of which he felt a strong probability) his friends would be liable to suf-

fer much inconvenience and injustice. His uneasiness upon this point was so great, that he had procured a friend to make memoranda, as he revolved his affairs in his mind, of a great variety of articles, which should have been charged and credited in his accounts. I remonstrated strongly against this exertion of his mental faculties, and endeavoured to calm his agitation; but without much success in either. I directed him to take the Pul. Ipecac. &c. and the fermented decoction of cinchona, alternately, each at intervals of four hours; and the volatile oil of peppermint with tincture of opium, in small doses according to circumstances.

Early in the afternoon, I visited him again. The friend who was with him in the morning, being considerably interested in the settlement of his estate, had continued, notwithstanding my remonstrances, for more than two hours, to excite him to recollect all the circumstances of his business, that he might take minutes of them. As soon as he was gone, Mr. J. called his workmen, and gave them particular directions how to proceed in his business. In this he was occupied nearly another hour, and almost immediately after, sunk into a comatose state; in which situation I found him. When he was spoken to, he would open his eyes, give a vacant stare, and if powerfully excited, would answer correctly, and immediately sink back into stupor, and apparent insensibility. He swallowed readily whatever was put into his mouth. His pulse was quicker than natural, apparently full, upon a slight touch, but yielded very much, and almost disappeared, under the pressure of the finger. The tongue was covered with a thick dark coloured coat. The skin had an appearance of fulness, over the whole body, but more remarkably in the face, which was very red; it was rather non-elastic to the feeling, and poured out a profuse perspiration. A consultation was had at this time, and a very vigorous use of the stimulant remedies which have been often mentioned, particularly of the more diffusible stimuli, was prescribed. A large blister was applied to the back of the neck. The forehead and temples were directed to be frequently wet with cold water, or vinegar and water, and stimulating applications to be made to the feet; and the surface of the body, to be rubbed with a solution of cantharides.

*“Evening.—The coma continues, and the other symptoms much as in the afternoon, except that the patient is roused with more difficulty. Continue the medicines very diligently; apply blisters to the legs; and throw up stimulating injections.*

*“May 17th.—The coma continued until twelve o’clock last night, when he awoke and was perfectly rational, and his mind clear, for nearly two hours. Unfortunately his attendant, with a very benevolent but mistaken zeal, thought it more important to improve this opportunity in taking care of his soul’s health, than in administering the remedies which had been prescribed; and instead of giving the medicines with care and attention, and of promoting his rest and quietness, as he ought to have done, and had been strictly enjoined*

to do ; he spent the whole time in talking, and exciting him to talk, of his hopes and prospects beyond the grave. According to the report of the attendant, Mr. J. carried on an almost uninterrupted conversation for about two hours, and then sunk back into a deep coma, from which he never awoke.

" When I saw him this morning, his face was of a deep crimson, almost purple colour ; his respiration slow, deep, laboured and sterterous ; his tongue black ; pulse slow, and apparently full, but exceedingly compressible ; the whole surface of the body covered with a profuse perspiration. It was impossible to rouse him from this comatose state, so as to make him speak or take notice of any object. The liquids which were put into his mouth, were ejected with great force on to the bed, or into the faces of his friends ; as if sufficiently sensible to be conscious of their presence, but not enough to swallow them. The remedies were continued as long as there was any opportunity of doing it ; but he died at about ten o'clock.

" I wished very much to make an examination of the body, but in vain."

# INTELLIGENCE.

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[Communicated.]

*Squinting.*—“ \* \*, aged 35, squinted ever since infancy. Twenty times he set himself to try to force his eyes to act together on objects submitted to them, or, by covering the left eye which was much the strongest, to use the right only, to strengthen which by use seemed a necessary preliminary. Hours together he read or wrote, alternately using his right eye and both eyes, striving to make them coincide towards the same point. When he looked at a near object, requiring to be seen with precision, squinting seemed necessary. Confused vision and great mental fatigue followed his attempts. These effects lessened; in a few days his right eye grew as strong as his left, and he could not prevent them from acting in concert. Many months have since past, nothing can show which eye squinted; both eyes are stronger than the left was.”

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## Foreign.

*On the Dangers of Dissection*, by M. Percy.—THE accidents to which the anatomist is liable in the prosecution of his studies may be divided into two classes: those resulting from the putrid gases extricated from the dead animal matters, and acting on the system generally; and those from inoculation of a septic principle, in wounds.

1. Cullen had long ago observed, that anatomical students enjoyed excellent health, in general, notwithstanding their being so much among the exhalations from dead bodies. Professor Bosquillon in one season dissected nearly 600 bodies, of all ages, sexes, and conditions; and states, that of five hundred pupils who passed from six to eight hours daily in dissecting, three only contracted disease from thence, and but one died. It is very different with them in their pathological investigations. Out of one hundred pupils employed in hospital service, sixty were seized with hospital fever. But we are not to infer

from these premises, that no danger attends the dissection of bodies. A well-known and melancholy example will prove the contrary. Dr. Chambon, in order to demonstrate the liver and its appendices, laid open the abdomen of a subject considerably advanced in decomposition. A horrible gas immediately issued forth, and nearly overwhelmed the demonstrator and four others. One of these, M. Corion, fainted away, was carried home, and died in sixty hours! The celebrated Fourcroy, who was also present, would, it is supposed, have shared the same fate, had it not been for an exanthematous eruption which was strongly out on him at the time. Messrs. Laguerenne and Dufresnoy remained long ill, and the latter was never restored to health afterwards. The Professor escaped best, although he proceeded on with the dissection. In the night he had a fever, which ended in a copious perspiration towards morning, and left him free from complaint.

At Dijon, in 1773, the accidental opening of a coffin in which a body had been six weeks buried, affected 114 people dangerously, and of whom 18 died. Many individuals have perished from the escape of animal gases of this kind; instance the grave-digger of Montmorency. We shall not recount what passed during the evacuation of the Cemetery of the Innocents, where, among others, Thouret contracted a fever that nearly terminated his existence.

But, fortunately, these instances are rare, and we see thousands of anatomists enjoy good health among corpses in all states of putrefaction. Who has dissected more, or prosecuted pathological anatomy more, than our venerable colleagues Tenon and Portal, who are blessed with a green old age? Look also at Walter, Mascagni, Scarpa, Scämmering, Pelletan, Deschamps, Launonier, Chaussier, Boyer, &c. who have spent nearly half their lives among dead bodies, and yet promise a happy longevity.

It is said that Claude Perrault fell a sacrifice to the dissection of a putrid camel; and that Taren shared the same fate from demonstrating a human body. We may add, that the memorable Bichat would now have been living, had he not given himself up too much to dissection and macerations of morbid parts. Indeed, we see students daily destroyed by too enthusiastic a pursuit of anatomical studies.

2. But it is from inoculation of dead matters that the great danger is to be apprehended. Dr. Chambon relates, that having pricked his middle finger with the sphænoid bone of a skull that had been long in maceration, he was soon afterwards seized with the most intolerable pain, and inflammatory swelling

of the fingers and hand, and with a number of acute and uneasy sensations, which he compares to those of the most violent gout. He experienced, in 1810, a similar train of accidents, from dissecting a body while there was a slight excoriation of the middle finger. Constitutional symptoms of great violence supervened, with disturbance of the mental faculties, great irregularity of the pulse, and extreme debility.

It has been long observed, that one of the most striking phenomena attending the accession of plague and other pestilential fevers, was a peculiar mental despondency, and disturbance of the sensorial functions. The very same takes place in the inoculation of septic poison in dissection, as was almost fatally exemplified in the person of the illustrious Corvisart, in 1786. This distinguished ornament of the profession pricked his finger while inspecting a dead body. Presently the whole arm swelled to an enormous size. Desault was obliged to make repeated and deep incisions into the tumefied parts, which Corvisart bore with considerable firmness, although he had experienced the peculiar mental despondency appertaining to the disease, even to *despair*.—"Circonstance qui affligea plus vivement les temoins assidus de sa triste situation, que tous les autres ravages qu'avait produits le virus inoculé."—Finally, however, the skill of Desault (whose friendship for the patient did not arrest the salutary course of the knife, or prevent him from acting the determined surgeon,) triumphed over the effects of the poison, and restored to health our beloved colleague.

In these accidents, the train of symptoms is not always equally *painful* and dangerous. I knew a student, who, having cut himself while tracing the nerves on a subject which he had kept for some weeks, died, in three days, in a state of the greatest debility, but without experiencing any pain, although gangrene occupied the whole arm. In other instances death has taken place at a much earlier period. It was probably in this way that Professor Leclerc perished in thirty-six hours, after feeling the pulse of a patient ill with malignant fever. His finger was excoriated, and the sick man's arm was covered with perspiration. Perhaps, however, his death might be owing, as in the case of Corion before mentioned, to the *pulmonary* absorption of a deleterious gas from the diseased body.

M. Chambon states, on the authority of several historians, and on the testimony of the President De Thou, that the Peruvians, animated with just vengeance against the Spaniards, dipped their arrows in the sanies flowing from the putrifying bodies of their unfortunate comrades, in order to render the wounds of their oppressors more certainly and more speedily fatal.

M. Huzard observes, that no carcases putrify so quickly, and emit so much dangerous exhalation, as those of herbivorous animals, as the horse, the ox, &c. He has seen numerous fatal instances of this poison among the veterinary students, when they happen to wound themselves in dissecting these animals, even within three or four days after death.

*Treatment.* We may here observe, with the celebrated Fabricius Hildanus, that it is not the virulent matter of poison, such as it appears to the eye, which is so quickly absorbed, and proves so rapidly fatal. It must be some subtle principle contained in it, and which eludes the sight. This view of the subject leads to the surest mode of arresting the evil, viz. either by removing the part, or destroying its organization, so that the process of absorption may be prevented. It is the cautery, either actual or potential, that the best anatomists of the present day rely on. As the wounds of dissection are generally small, a red hot needle will usually be sufficient. But, as these wounds are sometimes made by needles, or the points of hooks, it is not so easy to apply the cautery to their bottoms. Here we may take a lesson from mechanics, who, when they prick their fingers or hands with pointed instruments, immediately throw a little oil on a piece of burning coal or charcoal, and hold the wounded part over the smoke, which cauterizes the wound completely.

For several years past, the precept and example of Professor Chaussier have been adopted in the anatomical schools of Paris; viz. Each student keeps constantly in his pocket a small phial of liquid butter of antimony (muriate of antimony,) and whenever he wounds himself in dissecting, plunges the point of a little wooden pencil into the caustic, and instantly cauterizes the puncture or wound. It is dangerous to wait till the actual cautery can be got ready. We ourselves always recommend the strong *nitric acid*, where the wound is tortuous, or made with a sharp-pointed instrument, as this liquid immediately penetrates through every part of the puncture, and completely disorganizes its parietes, and renders them incapable of taking up any part of the septic principle.

When unfortunately the poison has taken effect, we know of no *specific* means of checking its progress, and are obliged to combat the symptoms on general principles, for which no rule can be laid down. It is to be hoped, however, that the prudent precautions of the Parisian schools will be imitated in those of Great Britain, where we know, from painful personal experience, that dissection wounds are too much despised and

neglected ; or at best but washed clean, and touched with nitrate of silver, which is by no means an effectual cautery.

*London Medico-Chirurgical Journal.*

*Simple Remedy for preventing the Distortion of the Spine in Children.* By Dr. WEITCH, in Berlin. From Hufeland's Journal for July, 1818.

DR. WEITCH having some time since been frequently consulted in cases of children labouring under distortion of the spine, found the simple washing of the same with spirituous liquors, together with a strict attention to keeping their bodies straight, of such decided benefit, that in children under eight years of age it produced a perfect cure, and in the worst cases, at least a sensible amendment. This evil for the most part not being discovered before other deformities, such as a higher shoulder or hip, strikes the eye, he thinks it his duty and consonant with his profession, to direct the attention of all parents that have the welfare of their children at heart to this point ; earnestly advising them to examine, from time to time, the spine of their little ones ; and on the smallest deviation being perceptible, without delay to cause the faulty place to be washed every morning and night with common brandy. Even if the sound spine is washed once a week with it, it will be less subject to this complaint.

*London Medical Repository.*

THAT species of *Spinal Distortion*, which appears solely to depend on a divergence of the axes of the bones of the vertebræ from the centre of gravity, as a consequence of rickets in infancy, but which, when once it has taken place, generally continues to increase, according to the laws of mechanics, until the period of puberty, is now generally treated in the public hospitals in London, with success, by mere confinement of the patient to the horizontal position on an unyielding surface. Medicines calculated to remedy any derangement of the general system, with which it may be accompanied, are occasionally had recourse to at the same time. But the use of caustic issues, setons, perpetual blisters, &c. formerly employed with so little discrimination in spinal distortion, is now generally abolished in the treatment of that species to which we allude. The period required to remedy the derangement is certainly long,—frequently two or three years ; but, if the regimen of the patient be judiciously ordered, his health does not suffer material injury.

*Lond. Med. and Phys. Journal.*

*Account of the Manner of Treating the Patients in the Plague Hospitals at Constantinople.*—All the patients labouring under this disease are, without any distinction, subjected to the same treatment. The strictest diet is prescribed, and they must be satisfied with only a light lemonade, with very little or no sugar; copious draughts of which are allowed. If the patients in slight cases have much appetite, they have half an ounce, and sometimes a whole ounce, of biscuit allowed them two or three times a-day, which is soaked in the lemonade. This diet is continued till the fifth, and in difficult cases till the seventh day, as the period of the first and most dangerous stage of the disease. Should the patient prove costive, a suppository is applied on the seventh day, which commonly produces a stool, and greatly mitigates the symptoms: his diet, from this day to the 14th, consists of a decoction of rice or barley, together with a few anchovy-biscuits, and lemonade. At the expiration of this period, the patient is said to be out of danger, provided improper diet, or other occasional causes, do not again make the sickness worse. From the fourteenth to the twenty-first, and sometimes even to the twenty-eighth day, the patient, besides the above-mentioned diet, has rice or barley-broth, in which, in slight cases, a little butter is boiled. After this period, the patient gradually takes chicken-broth with rice or barley, and at times some part of the chicken itself, which is continued till the fortieth day, when the patient is discharged. The surgical treatment is much more active. On the small raised anthrax, not surrounded with any bluish margin, the shell of an hazel-nut cut across and filled with honey, is applied by means of a firm bandage, till the ulcer becomes clean; which is then dressed with digestive ointment, or the leaves of beta, and covered with cataplasms of linseed-oil. Large, well-raised, and red anthraxes, are also treated with cataplasms, digestive salve, and beta leaves. If the anthraxes are flat, extended, and of a bluish-brown colour, cataplasms of red wine, or decoction of bark in red wine, are applied lukewarm, till they either discuss, or pass over into suppuration, which however is seldom the case: this kind of anthrax proving, for the most part, mortal. If suppuration notwithstanding succeeds, the malignant ulcer is cleansed with decoction of bark in red wine, and powder of bark, till it becomes benignant; when the same treatment as above is adopted. The buboes are treated with emollient cataplasms till they become ripe; then opened with a lancet, dry lint introduced in the opening, and also covered with beta-leaves. If the bubo

is malignant, it is injected with red wine, with or without bark, or dressed with turpentine, till it becomes benignant.

*London Med. Repository.*

M. ESQUIROL, a short time since, read a Memoir to the Medical Society of Paris, containing the result of his observations at the *Salpêtrière*, during the years 1811, 1812, 1813, and 1814.

The number of insane persons admitted into that hospital during this period was 1,119; ninety-two of whom became insane after child-birth, during lactation, or at the time of ceasing to give suck.

Insanity manifested itself from the first to the fourth day subsequent to delivery, in 16 women;

From the fifth to the fifteenth, in 21;

From the sixteenth to the sixtieth, in 17;

From the sixty-first to within a year, in 19;

Immediately after ceasing to give suck, either voluntarily or forced, in 19.

The development of the malady is consequently more to be feared in women recently delivered, than in those who have given suck for sometime; and it becomes more rare as this period is extended.

Of these 92-insane persons, 8 were in a state of folly, 35 in that of melancholy, and 49 were maniacs;—22 were from 20 to 25 years of age; 41 from 25 to 30; 16 from 30 to 35; 12 from 35 to 40; 2 were above 40 years old;—63 were married, 29 unmarried women.—14 became deranged from the action of physical causes, (almost all of them from the impression of cold;) the remaining 78, from moral causes.

Of 55 who recovered, 4 did so during the first month; 7, during the second; 6, during the third; 7, during the fourth; 5, during the fifth; 9, during the sixth; 15, from the sixth to within two years; and 2, after two years.

Of the 37 who were not cured, only six died. Examination of the body after death did not afford any information respecting the cause of the disease.

A singular pathological phenomenon has been noticed by M. Esquirol, in the bodies of many lunatics, after death—the displacement of the tranverse portion of the colon; on which he makes the following observations:—

“The ancients and the moderns who have treated of mental alienation, and particularly of melancholy, have all spoken of lesions of the abdominal viscera; but no author has mentioned a displacement of the transverse portion of the colon. A dis-

placement of this intestine may, however, be frequently observed in the bodies of insane persons. Sometimes, the direction of it is oblique; at others, perpendicular, so that its left extremity is situated behind the os pubis.

"This displacement cannot be attributed to mechanic action, dependant on thickening of the coats of the intestine, or a collection of fæces in its cavity; for, in the greater number of subjects that I have examined, the colon was empty, and in all it was in a healthy state as to structure. The same was the case with the ascending and descending portions of it, which, by their relative situation, could draw it from its natural direction. This displacement is not the effect of the last disorder under which the patients die; because this circumstance has been observed in those lunatics who have died of different diseases.

"The insane persons, particularly melancholics, in whom this displacement was observed, frequently complained of pains in the epigastric region, which they described as feeling as though a cord were tied round the body about the hypochondria, and the stools were generally in a bad state. May not these symptoms be explained by the displacement of the colon?

"Have not the ancients, in administering hellebore; and the moderns, in prescribing emetics and drastics, in the treatment of mental alienation, particularly in melancholy; aimed at restoring the healthy state of the abdominal viscera? But, may not purgatives be considered injurious, since they increase debility of those parts? and, thus, have they not taken care to join them with tonics? Lastly, do not sea-voyages, and horse-exercises, so beneficial in melancholy, act by strengthening the abdominal viscera particularly.

"The knowledge of these facts has appeared interesting to me,—1st, because this displacement is frequent in insane persons, particularly in melancholics; 2dly, because an acquaintance with this fact may lead to a more decided and rational mode of treatment in that malady."

*London Med. and Phys. Journal.*

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**Foreign Bodies in the Oesophagus.**—It not unfrequently happens, that we see a fellow creature snatched suddenly from this life by the arrest of a foreign body in one of the passages leading to the lungs or stomach. Although the latter is less frequently fatal than the former, on account of the possibility, generally speaking, of forcing the foreign body down into the stomach by means of a probang; yet it occasionally happens, that it is either impracticable or imprudent so to do; and then

we are at our wit's ends, for to cut down upon the oesophagus is no trifling operation. The two following cases will not therefore be considered uninteresting or useless, as they elucidate a remedy which we believe has not been employed in this country.

*London Medico-Chirurgical Journal.*

**Case 1.** "A soldier swallowed a piece of tendon of beef, which stuck fast in the middle of the gullet. He was immediately seized with anxiety, convulsions, and fell down on the ground. The surgeons present endeavoured to force down the obstruction into the stomach, with a probang, but in vain. The symptoms now became aggravated ; the convulsions were uninterrupted ; the abdomen became tumefied ; the face, the hands, and the feet, grew cold ; the voice feeble ; a cold sweat covered the whole body ; the pulse faltered ; and in short death was at hand ! M. Kohler immediately opened a vein in the arm, and injected a solution of ten grains of emetic tartar, which in half an hour brought on so violent a vomiting, that the piece of tendon was thrown to a distance of eight feet, and the poor man was instantly relieved. *Dict. des. Sciences Med.* tom. vii. p. 22.

**Case 2.** "A man, 60 years of age, who had no teeth, ate a quantity of beef for supper, without sufficiently chewing it. A piece of it stuck in his throat, and every attempt to push it down was unavailing. The patient was on the very point of suffocation, when Surgeon Knopff dissolved four grains of tartrite of antimony in half an ounce of warm water, which was injected into the median vein of the right arm, at a blood heat, by means of a syringe with a small pipe. In one minute the patient began to feel the effect, and very soon afterwards vomited up a piece of beef as large as an ordinary egg, and was instantly relieved." *Journal Gen. de Med.* tom. xxxii.

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*Case of a Child aged six months, who swallowed a Double-Bladed Knife, without Injury.*

**March 16th, 1802.** A child of Jonathan White's, Southgate, Chichester, about six months old, had a small double-bladed knife, about two inches and a half in length, given it to play with. On the return of its mother to the room, she sought in vain for the knife, in all parts of the cradle in which the infant was lying : the child expressed some uneasiness at the stomach, from which the mother concluded it had swallowed the knife ; the bowels were kept lax by the use of castor oil ; and the faeces soon began to grow black. The child took no food, but milk ; seemed often very uneasy in its stomach, and had slight febrile indisposition ; yet it continued to look well, and was sufficiently fat.

*May 24th.* The shortest blade was discharged by the bowels ; the back of it very much corroded, its edges being ragged, uneven, and saw-like : the rivet was entirely dissolved. The general state of the child's health, as stated above.

*June 16th.* The child, after being for a day or two more than usually uneasy, and rejecting every thing offered as food, brought from its stomach, in vomiting, one side of the horn handle about two inches in length, very much softened and bent double : a small bit of iron was passed a few days afterward by stool. He frequently expresses great pain in his stomach and bowels, and starts much when asleep ; he has retained no nourishment for three days, and now looks much emaciated.

*July 8th.* The child more emaciated, takes little food, and unless when quieted by a decoction of poppies, expresses more pain, continually writhing. Its bowels are lax, and the stools have a black appearance, and the abdomen exhibits externally a degree of inflammation. His pulse is soft and moderate while asleep ; the skin feels rough ; has voided nothing since the horn handle.

*July 24th.* To-day he passed a bit of iron, which was about half an inch in length, of a wedge-like shape, much corroded, and full of holes, and appearing to have been the large blade.

*August 11th.* The child has been in a convalescent state for the last fortnight, grows fatter, and looks much better ; has been more quiet, although he has not slept much ; the decoction of poppies has been omitted for some time past ; the pulse full and strong ; sucks more heartily, and now eats sopped bread three or four times a day. Yesterday and to-day it has been more uneasy : about five o'clock in the evening vomited up its milk, together with the back of the knife, two and a half inches in length, pointed, and corroded at one end ; the other nearly perfect, and first presented itself at the mouth ; soon after, it vomited the other side of the horn-handle, softened, the edges uneven, and dissolved. The child was much exhausted by its efforts, and soon fell asleep. The stools are some days of their natural colour, and sometimes black.

*Dec. 20th.* The child is now in perfect health, remarkably robust, and has not experienced a day's illness since August.

The notes from whence I have taken the above particulars were made at the moment by Mr. J. N. Shelley, now a surgeon in the army, who was at that period my senior, and whose observations I can corroborate most fully.

*Journal of Science and the Arts.*

*On the use of Moxa in Hydrocephalus.*

M. REGNAULT has lately published a Memorial on Hydrocephalus, with the intention of making known the beneficial effects he has derived from the use of moxa in the treatment of that disease.

The author first traces a sketch of the history of the disease, and the pathological opinions which have been adopted respecting it at different periods, and makes some judicious remarks on its real character, and the appropriate mode of treatment in its early stages ; but we shall confine ourselves to the relation of those which apply to the use of the remedy to which we have alluded.

"The process consists," observes Mr. Regnault, "in the application of successive trains of moxa, or little rolls of cotton, in two lines ; the direction of one of which should be from the middle of the forehead to the eminence of the occiput ; the other, from one temple to that on the opposite side. The rolls should be but slightly twisted, so that the combustion may not be too active, and the emission of caloric too abundant : they may be of about four or five lines in diameter, and eight or ten in length, regulated according to the age of the patient and the presumed thickness of the integuments. After having determined on the situation in which it is to be applied, the part is to be covered with a strip of strong close-grained woollen cloth, about three inches in diameter, on which the coil of moxa is to be placed ;\* a stream of air may then be directed on it by appropriate means, sufficient to maintain combustion. Moxa, applied with these precautions, does not produce actual cauterization, but a considerable degree of redness and slight tumefaction of the part, which becomes covered with drops of limpid serum.

"It remains for me to point out the cases where this measure may be productive of injury," continues the author, "and those in which it may be employed with hope of success.

"It is evident, that, whenever there is severe pain about the temples, redness of the face and of the conjunctive membrane of the eyes, acute fever, great agitation,—indeed, any of the signs of increased afflux of blood to the head ; that a measure like this, adapted to increase that occurrence, should not be employed. But, when those symptoms have disappeared, and those alone remain which announce compression of the brain,

\* It may be confined in its situation by a tube of pasteboard, or covering the cloth with the white of an egg.

or dilatation of it from the presence of fluid within the ventricles ; there is then no reason to prevent the application of moxa, with the precautions above indicated.

"The use of this remedy should not make us dispense with purgatives, and other measures that may be considered advisable ; for, I repeat, I have wished to point out a method of treatment, which I believe to be useful, not to hold forth a specific.

"I shall now relate two cases in support of the principles I have advanced in this memorial, and which, I hope, will confirm the propriety of them.

"An infant, aged eighteen months, of a well-marked lymphatic temperament, was brought to me in the year 1808. This infant, pale, and tolerably plump about the superior half of the body, fell into violent convulsions whenever it was forcibly shaken. Excepting under these circumstances, its inferior extremities, which had been for a long time in a state of miasma, were never observed to perform spontaneous motion. I remarked, in the first place, a striking disproportion of the size of the cranium to that of the face,—a disproportion which showed the existence of hydrocephalus in a very advanced stage. The cavity, particularly about the posterior part, was of nearly double the ordinary extent. The sutures and fontanelles were very large, and a fluctuation could be felt through the interosseous membrane ; the bones were hardly compact, and gave way to a slight impression of force ; and the eyes projected so as to be nearly without the orbits. The digestive organs were weak, the tongue pale, and obstinate costiveness announced the torpid state of the intestines ; the appetite was almost destroyed. The whole of these symptoms, some of which appeared during the first month after birth, would not permit me to hesitate an instant in forming an opinion on the nature of the disease. I directed animal broths, a small quantity of wine, and the use of bitter and steel medicines. Twice a week, the patient took one or two grains of calomel ; and gentle purgative glysters were frequently administered ; and every third or fourth day the moxa was applied to the cranium. After it had been employed four or five times, the convulsions were less readily excited ; they after this gradually ceased, and the infant might be shaken with impunity. Nutrition became better effected ; the inferior extremities recovered their plumpness and natural motion. After this mode of treatment had been continued three months, the volume of the head was evidently diminished ; the bones more nearly approached each

other, and were less flexible ; the eyes were less projecting ; the constipation of the bowels disappeared ; and I had the satisfaction to consider that I had snatched this infant from almost inevitable death. (The moxa was applied eighteen times.) I have seen this patient since that period : the bones have acquired the necessary solidity ; the head is still a little voluminous, but health is perfectly established.

*London Med. & Phys. Journal.*

*Cure of founder'd Horses by Excision of about two inches of the principal Nerves on each side of the Pastern Joint.  
Extracted from a Letter of a Physician in London, to Dr. Duncan, Professor of Medicine, Edinburgh.*

THIS operation has succeeded admirably, and will probably lead to a similar practice in the human subject. It has hitherto failed frequently in the *tic dououreux*, and other diseases, either from the regeneration of the divided nerve producing a union and a restoration of sensation, or from the effect being produced by the swelling of the ends of the cut nerve sufficient to effect the union. But the excision of two inches in length effectually prevents such a restoration of feeling. Mr. Sewell, the well-known Assistant Professor at the Veterinary College, who has the exclusive claim to this improvement, in the course of the last 18 months, performed this operation on above 100 horses with uniform success, except perhaps two or three instances, in which there was a very great organisical disease of the foot. As on former occasions of splendid discoveries, detraction has circulated a number of misrepresentations, but the best answer is, the work done by the horses since the excision. Although the operation requires the skill of Mr. Sewell, it is very simple. It consists in cutting down, upon the trunks of the nerves which enter the foot in contact with the arteries, on each side of either the small or large pastern joint, and then removing a piece of the nerve. A few minutes after the operation, the animal walks and trots like a sound horse, which just before could scarcely move at all, and then in extreme pain. The principle is obvious,—it is that of removing the conductors of sensation from the seat in the disease to the brain. The division of the arteries accompanying the nerves is carefully avoided. The diseases of the foot, in this way cured, are too various to mention. It is adapted for all of them.

*Edin. Med. & Surg. Journal.*

*On the spontaneous Combustion of Cotton Goods, which have been imbued with Linseed Oil.* By MARSHALL HALL, M.D.

It is well known that cotton goods, either intentionally, or accidentally, imbued with linseed oil, are liable to take fire spontaneously.\* Two instances of the latter accident have occurred within the writer's knowledge, by which the danger of dreadful fires was incurred. Many fires in cotton mills are probably owing to this accident; and this reflection should suggest a particular caution on the part of the owners and ensurers of these manufactories.

It has also occurred to the writer, to see the spontaneous inflammation of the oiled cotton itself, and to examine the heap of oiled cotton before and after the combustion had begun and had been arrested. The centre of this heap, even when far from the state of combustion, was many degrees higher than that of the surrounding atmosphere.

The rationale of this phenomenon appears to be the following; the oil absorbs the oxygen from the contiguous atmosphere. This may be readily seen by enclosing a portion of cotton moistened with linseed oil in an inverted glass jar; the enclosed gas is in the course of a short time diminished in bulk and deprived of its oxygen. In large heaps, a degree of increased temperature is induced by the consolidation of the oxygen gas. This in time augments, so as to induce that species of combustion, which consists in the propagation of sparks, but is unattended with flame. At length complete inflammation is induced.

The transition from the slow combination of oxygen, to the state of combustion without flame, and from this latter to inflammation, is worthy of the particular attention of chymists.

*Journal of Science and the Arts.*

*Newly discovered Membrane in the Eye.*—Doctor Jacob, Demonstrator of Anatomy in the University of Dublin, has discovered, and demonstrated in his lectures on the diseases of the eye, this spring, a membrane covering the external surface of the retina, in man and other animals. Its extreme delicacy accounts for its not having been hitherto noticed. He arrived at the discovery by means of a new method of displaying and examining this and other delicate parts. He argues from analogy, the necessity of the existence of such a membrane, as parts so different in structure and functions as the retina and choroid coat must otherwise be in contact, in contradiction to the provisions of the animal economy in general. A detailed

\* See Nicholson's Journal, Vol. 21, p. 44.

account of the discovery, with the method of displaying the membrane, is in preparation, and will shortly be laid before the public.

*Journal of Science and the Arts.*

*Medical Properties of Salt.*—The importance and value of salt as an introduction unto food becomes continually more evident, as its medicinal properties are rendered more distinct and fully known. Among other salubrious virtues, may be mentioned its antihelminthic properties, which have been rendered very evident by the publication of some late cases. It appears that whenever salt is denied to the human being, diseases of the stomach are general, and that worms are engendered in the body; and in one instance, where a person, from aversion to that substance, had refused it either in food, or in any other form, they appear to have been the consequence, and remained for many years.

In Ireland, salt is a well known common remedy for *bots* in the horse; and among the poor people, a dose of common salt is esteemed a cure for the worms.

Ib.

*On a mode of preserving some Vegetable Remedies.* By Marshall Hall, M. D.

It is an object of much regret, that all the modes of preparing vegetable remedies hitherto employed are defective, and that no mode of preserving these substances with their virtue unimpaired should have been discovered. Sometimes the process of preparation injures the virtues of the remedy, or extracts them partially only: in other cases their subsequent preservation is imperfect. Dried vegetable remedies, extracts, tinctures, infusions, and decoctions, are all liable to one or more of these objections.

Might not some of the vegetable remedies be preserved without subjecting them to any previous process, or to the action of any external agent, by which their virtues are partially destroyed, or only partially extracted? In the case of digitalis, cicuta, hyoscyamus, &c. the writer has taken the fresh herb, collected free from dew, and having rubbed the leaves into the finest pulp, he has simply formed a properly consistent mass, by the addition and careful intermixture of white sugar or dried soap. In this manner the vegetable may be long preserved; and the advantages are obtained of administering it throughout the year in its pristine state, and without previously subjecting it to any operation, or to the agency of any substance by which its properties might be enfeebled or de-

stroyed. It must remain to be decided which of the two modes is the preferable one, and whether each may not be better adapted than the other, for the preservation of particular substances. Either compound may be formed into pills, or mechanically suspended in a draught or mixture.

*Journal of Science and the Arts.*

FOREIGN LITERARY NOTICES.

Mr. Parkinson is preparing for the press a Familiar Introduction to the Study of Fossils.

Mr. Coar's edition of the Aphorisms of Hippocrates, in Greek, Latin, and English, is now in a state of forwardness, and will be published within a few weeks. Gentlemen desirous of adding their names to the List of Subscribers are requested to send them to the Publishers, Cox and Son, St. Thomas's Street, Borough.

Shortly will appear, in one vol. 8vo. Practical Observations on the Construction and Principle of Instruments for the removal of Muscular Contraction of the Limbs, Distortion of the Spine, and every other Species of Personal Deformity. By John Felton, (late of Hinckley), Surgical Mechanist to the General Institution for the Relief of Bodily Deformities, Birmingham.

In a few weeks will be published, No. I. of a New System of Medical Botany, handsomely printed in royal octavo, with Plates coloured according to Nature, and Botanical Descriptions of each Plant, giving the place of its Growth, Medical Properties, Dose, &c. The Work is intended to comprise all the Plants now used by Medical Practitioners in the Materia Medica of the London, Edinburgh, and Dublin Pharmacopœias.

Preparing for publication, Observations on Inflammation of the Mucous Membrane of the Respiratory Organs, illustrative of the Pathology and Treatment of Bronchial Inflammation, Croup, Hooping-Cough, Measles, Catarrh, and those Affections resembling Pulmonary Consumption, &c. &c. &c.; exemplified by Cases, Dissections, and Coloured Engravings of the Morbid Appearance. By Thomas Alcock, Surgeon.

Shortly will be published, in 8vo., Cases, with Observations on Wry Neck, on the Reduction of Luxation of the Shoulder-joint, on the Operation for Hare-lip, on Cartilaginous Substances of the Knee-joint, on Aneurism, and on the Use of the Extract of Strammonium. By John Kirby, A. B., Member and one of the Censors of the Royal College of Surgeons in Ireland, &c. &c. &c.

FOREIGN PUBLICATIONS.

[Many of which may be had at Wells & Lilly's Bookstore, No. 97, Court-street, Boston.]

Sketches of the Philosophy of Life. By Sir T. C. Morgan, M. D. Octavo.

Practical Observations on the Nature and Treatment of Marasmus; and of those Disorders allied to it, which may be strictly denominated Bilious. By J. Ayre, M. D. 8vo.

Practical Observations on Fever, Dysentery, and Liver Complaints, as they occur amongst the European Troops in India. With introductory remarks on the Disadvantages of Selecting Boys for Indian Military Service. Illustrated by numerous Tables and Cases. By George Ballingall, Esq. 8vo.

**Pathological and Surgical Observations on Diseases of the Joints.** By B. C. Brodie, F.R.S., &c. 8vo.

**A Letter from a Physician in the Highlands to his Friend in London, on the subject of a Consumptive Habit.** 12mo.

**On Gun-Shot Wounds of the Extremities,** requiring the different Operations of Amputation, with their after-treatment, establishing the advantages on the Field of Battle to the delay usually recommended, &c. &c. with four explanatory plates. By G. J. Guthrie, of the Royal College of Surgeons in London; Deputy Inspector of Military Hospitals.

**Commentaries on the treatment of the Venereal Disease,** particularly in its exasperated state; including a second edition of a former publication on that subject, considerably augmented and improved, on the use of Mercury, so as to insure its successful effect. With an Appendix on Strictures of the Urethra; and on Morbid Retention of Urine. By Edward Geoghegan.

**Medical and Surgical Remarks,** including a description of a simple and effective method of removing Polypi from the Uterus, Tonsils from the Throat, &c. &c. likewise Observations on the different modes of Opening the Bladder in retention of Urine, from obstructions in the Urethra and Prostate Gland, and description of a more safe and effectual Method of Performing that Operation, Illustrated by Cases. By Edward Grainger.

**A Physiological System of Nosology;** with a corrected and simplified Nomenclature. By John Mason Good, F. R. S.

**Practical Observations on the Diseases of the Urinary Organs;** particularly those of the Bladder, Prostrate Gland, and Urethra. Illustrated by Cases and Engravings. By John Howship, Member of the Royal College of Surgeons in London, and of the Medico-Chirurgical Society.

**Practical Observations in Surgery, and Morbid Anatomy.** Illustrated by Cases, with Dissections and Engravings. By John Howship, Member of the Royal College of Surgeons in London, and of the Medico-Chirurgical Society.

**On Diagnosis in four Parts.** Part 1. The Phænomena of Health and Disease. Part 2. The Diagnosis of the Diseases of Adults. Part 3. The Diagnosis of Local Diseases. Part 4. The Diagnosis of the Diseases of Children. By Marshall Hall, M. D. Formerly Senior President of the Royal Medical Society, and Physician's Assistant Royal Infirmary, Edinburgh. (The 3d and 4th parts are not yet published.)

**An Essay on the Chemical History and Medical Treatment of Calculous Disorders.** By Alexander Marcet, M. D. F. R. S. Physician to Guy's Hospital.

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Lately appeared from the press of Cummings & Hilliard, Elements of Chemical Science, by J. Gorham, M. D. Professor of Chemistry in Harvard University. Vol. I.

#### TO CORRESPONDENTS.

Communications on *Tic Doloureux, Obliteration of brachial artery, Diseased bones,* by Dr. THACHER, have been received.

*Erratum.—Page 105, for Thatcher, read Thacher.*

# The New-England Journal

OF

## MEDICINE AND SURGERY.

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No. III.

*Case of Tic Douloureux, of obliteration of the brachial artery, and of diseased bones of the leg.* By JAMES THACHER, M.D.

[Communicated for the New-England Journal of Medicine and Surgery.]

**I**N our investigations pertaining to the human system, we have to lament the imperfect state of physiological knowledge, which precludes the ability to define the nature and cause of obscure diseases. Even the inquisitive dissector is too frequently baffled in his attempts to explore the arcana, or secret processes of nature, or detect the origin of that morbid affection which ultimately dissevers the thread of life. From its increasing prevalence, Tic douloureux, or neuralgia, has recently arrested the attention of physicians, and been described as a disease of the nervous system, exhibiting phenomena of a peculiar character. A detail, relative to the following instance, will serve to show the inveterate and unyielding nature of this novel disease.

Mrs. S. K—, a respectable lady in this town, has at various periods been afflicted with attacks of neuralgia. Having employed opium to the fullest extent, aqua ammoniæ, blisters and other external applications, without deriving any permanent advantage, recourse was had to extract of cicuta, (*coum maculatum*.) This medicine was exhibited for a few days, in doses of two or three grains without effect; but afterwards in increased doses, from 10 to 80 grains an hour, amounting in seven hours to 400 grains; 200 of which were taken during the last two and an half hours. The extract, although of a genuine quality, and administered to such unusual

extent, produced only a slight giddiness for a short time, and an abatement of the paroxysms, both in violence and frequency of recurrence ; but at the end of twenty-four hours they resumed their accustomed severity, and she lost all confidence in the medicines, but by means of an emetic she obtained a respite. At a subsequent period, the disease raged with such intolerable violence, in despite of every remedy, that she resolved to submit to the alternative of the surgical operation of dividing the diseased nerve, and this was accordingly performed in July 1817. The incision was extended to the bone, and the trunk of the suborbital nerve completely divided, and hopes were entertained that the long protracted sufferings of the patient were about being brought to a close. The pain, however, continued with more or less severity during the process of healing, after which she enjoyed an exemption for seven or eight months, and was even flattered with a hope that a radical cure would be the result of the operation. In the autumn of 1818, she was again visited with this distressing complaint, in its most excruciating form, and her sufferings for several weeks were almost insupportable. The pain, which before the operation was confined to the cheek bone, now extended to the forepart and top of the head and side of the face. The spasms occurring so rapidly, that the intervals of ease were seldom more than four or five minutes ; such was the irritability of the nerves, that the least action of the muscles of the face in coughing, chewing, or speaking, would produce a recurrence of the spasms, and excite the keenest anguish. During several weeks, she could not sleep quietly more than five minutes, and seldom more than one hour in forty-eight, although from 80 to 120 drops of laudanum were administered. Under these circumstances, I urged the trial of the extract of stramonium, beginning with one grain, and repeating the dose several times in a day ; no sooner was the system fairly under controul ; being rendered less frequent in occurrence, less acute, and shorter in duration. But unfortunately this medicine produced vertigo, blindness, extreme aridity of the mouth and fauces, loss of the power of articulation, great redness of the face, &c. In addition to these, as she laboured under a troublesome cough, a sensation of constriction at the breast, and a suppression of expectoration was evidently induced. Stramonium was now abandoned and the extract of atropa belladonna was substituted, having derived some confidence from reports of its efficacy in this disease. Of this powerful narcotic, two grains were repeated every 4th hour, or one grain every 3d hour, till twenty grains were taken ;

this in some degree, blunted the acuteness of the pain and spasms, but excited unpleasant sensations little less intolerable than stramonium, and the use of it was no longer persisted in. By the application of the extract of stramonium over the diseased nerve in the form of plaster, the paroxysms were immediately suspended, and on a repetition in this form, on various occasions the most essential relief was obtained; but after several repetitions, it failed to produce the desired effect. Still however, retaining confidence in the efficacy of this medicine, it became a desideratum to combine with it some substance that should qualify its narcotic powers, or obviate its deleterious effects, without diminishing its efficacy as an anti-spasmodic. For this purpose I resolved to make an experiment with pulv. ipecacuanhae, and having combined one grain of this with one and an half grains extract of stramonium; the experiment was fortunate beyond the most sanguine expectations. The paroxysms immediately yielded under the influence of two or three pills in a day; no stricture at the chest, nor check of expectoration ensued, and the deleterious effects in general were much less distressing than those of stramonium in its uncombined form. By the employment of this remedy for two or three days, the paroxysms were totally suspended, and during the last twelve weeks she has been entirely free from the complaint. Although the cure in this instance may not prove permanent and radical, it is a source of infinite satisfaction, should the disease recur, that the result of a happy experiment points to a remedy more deserving of confidence during the dreadful paroxysms, than any other with which we are acquainted. Within the sphere of my information, derived from correspondents and inquiries, more instances can be adduced of successful treatment by means of stramonium, than by any other remedy; and by the addition of ipecacuanha, as now ascertained, its deleterious effects may be essentially ameliorated. In this connexion the idea is suggested, whether the deleterious properties of other narcotics, as cicuta belladonna, &c. are not susceptible of correction by a combination with ipecacuanha, so as to admit of exhibition in larger than ordinary quantities? In the case of Mrs. K. the cicuta, belladonna, aqua ammoniae, &c. were administered without that successful result which from favorable reports we had been encouraged to expect. Even the surgical operation of dividing the nerve, disappointed our expectations, and the result has been the same in another similar instance, which has since occurred. The position will probably be admitted that the division of a single nerve will not effect a radical cure, while the various ramifying branches are

left entire, and when the disease involves the whole nervous system, the operation must be deemed altogether ineligible. Neuralgia may on some occasions depend on a rheumatic diathesis, there being in some cases an obvious resemblance between the acute pain in rheumatism and that of the former disease; when this can be ascertained, blood-letting, calomel and opium combined, and the volatile tincture of guaiacum in large and repeated doses, will be the preferable remedies. It not unfrequently happens that the condition of the nervous temperament predisposes to this disease, rendering the patient liable to repeated returns of it, at certain seasons of the year, and it may be aggravated by general debility, colds, and a vitiated state of the stomach. In cases of this description, after evacuating the stomach and bowels, those means best calculated to operate on the whole system, as tonic medicines, exercise, and cold bathing, &c. should be directed, carefully avoiding at the same time all imprudent exposure to the changes of the weather. For the benefit of those who may not be conversant with this malady, it is deemed proper to remark that neuralgic affection is not invariably and exclusively seated in the nerves of the face. Instances are recorded of this complaint being seated in the nerves of the finger, the thumb, toe, and forearm, in consequence of wounds, or from unknown causes.

### *Obliteration of the brachial Artery.*

*James Warren, Esq.* aged 61, suffered an amputation of his right thigh in consequence of a gun shot wound in the year 1782, since which he has employed a crutch to aid him in walking. In December 1818, he unfortunately received a fall on the floor, and the right arm being under his body, sustained the force of the blow; the injury however appeared to be very inconsiderable, and some time elapsed before any application was made. About three weeks after the accident, I found him exercised with considerable pain in his arm, resembling rheumatism, but accompanied with a degree of numbness and coldness. Applying my finger to the wrist, no pulsation was perceptible in either the radial or ulnar artery; nor could I discover any arterial action in any part of the arm. At the other wrist the pulse was full and hard, and considerable fever was indicated. Twelve ounces of blood were taken from the well arm, and vesication and stimulating applications, directed to the arm affected. At the expiration of several days symptoms of amendment appeared, the sensations of numbness and coldness gradually subsided, and by the aid of the cold

bath and friction, the arm resumed in a considerable degree its natural temperature and ability to action. No emaciation has ensued, nor much diminution of muscular strength, the veins have become more prominent and turgid, but the extremities of the fingers still continue to be more susceptible of cold than formerly. How long this abolition of pulsation has existed, cannot be ascertained, but that the arteries of the arm have ceased to perform their usual action for more than ten weeks, is a fact, decided by accurate and repeated examination. Can it be supposed that the pressure of the crutch in the axilla, has had the effect of inducing an adhesion of the coats of the artery, and thereby rendering the muscles of the limb more susceptible of injury; or shall the obliteration be ascribed solely to the fall? Mr. W. recollects experiencing some degree of numbness and inability of the arm for years past, after much walking with the crutch, but not to such extent as to indicate any alarming effect. In Cooper's Dictionary of Surgery, when treating of aneurism, it is observed, that "Morand proved that a violent blow may lead to the obliteration of an artery;" but he does not explain the principle on which this process is effected. It has been a received doctrine, that when a ligature is applied round an artery, one of its coats is ruptured, by which adhesive inflammation is induced and the artery becomes impervious. But, "Mr. Crampton proves by various observations and experiments, that the obliteration of an artery can very certainly be effected independently of the rupture or division of any of its coats," and, "that a very moderate degree of irritation applied to the *external* coat of an artery, aided by a sufficient degree of compression to bring its internal surfaces into contact, is sufficient to effect the obliteration of the canal," and "that it may be effected by such process in a period not exceeding 24 hours."\* Whatever in this instance may have been the cause of the impervious condition of the artery, the fact that the limb has since been supplied with arterial blood, adequate to maintain its vitality and strength, is a singular phenomenon, calculated to display the wonderful resources with which nature has endued the animal system.

### Diseased bones of the Leg.

A young man in the town of Scituate had been for about ten months afflicted with a diseased state of the bones of his leg. On the anterior part of the tibia a large exostosis or os-

\* New-England Medical Journal, Vol. vii. p. 74.-

seous tumour appeared, and the whole limb from a little above the ankle to the knee, was daily increasing in size. A hard tumour was discovered in the ham, and the patient began to manifest symptoms of hectic. Conceiving amputation to be indispensable, I performed the operation above the knee, assisted by Drs. Otis, Bayley and Callimore. On examination, the tibia and fibula were found to be united into one solid substance, the bones exhibited no marks of necrosis or caries, but were enlarged to about thrice their natural size; being sawed transversely about midway between the knee and ankle, the bony substance measured on its longest diameter 4 inches. The tumour in the ham being dissected out, was found to be a complete bone, or osseous substance, about three inches long and two inches broad, entirely disconnected with the femur. Unacquainted with any theory adequate to account for the phenomena of the growth and diseases of the bones, I hazard no observations respecting this singular instance.

Plymouth, March 10, 1819.

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*On the use of the Nitrate of Silver.* By JOHN WARE, M. D.

[Communicated for the New-England Journal of Medicine and Surgery.]

THE cases related by Dr. Balfour, in a late number of the Journal, of the internal use of the Nitrate of Silver, in various diseases, appear to be of at least sufficient importance to invite further attention and claim a more careful investigation; and although it is seldom that remedies to which so much is ascribed, ever fully answer the expectations formed of their efficacy, yet any experiments with regard to them are of a certain kind of value, since it is almost as important to exclude useless and superfluous articles from our list of medicines, as to introduce those which are really possessed of power. As Dr. Balfour does not seem to have been guided by any particular principle in the selection of cases for trial, and as none can be gathered from the result of his experiments, I have administered it in the same manner, without much regard to the particular state of the system; choosing those patients who did not seem likely to be benefited by other remedies, or those who had made use of them without advantage. In the relation of cases I observe as nearly as possible the order of time; and those general remarks which have occurred from the use

of the medicine, will follow most naturally after the detail of the cases.

**CASE I.**

**H. P.** a female, aged about 60. This patient had been extremely ill of typhus fever which continued for some time, and finally left her with many unpleasant symptoms, which probably proceeded in a great measure from an habitually bad state of her bowels. She was distressed with long continued and obstinate pain in the head, a cough, nausea, and vomiting, and dysenteric symptoms. These were partially relieved, but with the cough she began to bring up a little blood. She began with the Nitrate of Silver and took one eighth of a grain combined with a little rhubarb, three times a day. After a few days the dose was increased to one quarter and continued for about ten days without any perceptible effect. She slowly recovered without being sensibly benefited by any remedy.

**CASE II.**

**S. P.** aged 29. Had been sick some months, under other attendance, with what was called a slow fever, but was finally transferred to the Dispensary, and came under my care. She was extremely intemperate, and continued this habit even while sick. Her symptoms seemed to indicate disease in the chest, as she had cough, pain in the side and palpitation of the heart. Her pulse were small, frequent, but not irregular. Her appetite poor, tongue slightly coated, bowels costive. Her difficulty seemed very soon, after a few remedies, to be entirely transferred to the abdomen, and she was troubled with frequent vomiting, diarrhea, and with much pain and swelling of her bowels, which was not however dropsical. She now took the nitrate of silver for a short time in doses of one eighth and one fourth of a grain, but without benefit. She grew worse and had an attack of dysentery, from which she recovered, but without any relief of her former complaints; the pain and swelling in her bowels continuing, accompanied by very irregular discharges. At length, however, by putting her upon a regular course of mild cathartic medicines, accompanied by very gentle doses of mercurials, not sufficient to affect her mouth, she almost entirely recovered.

## CASE III.

L. N. aged 56. This was also a woman habitually intemperate who came under my care Sept. 26, 1818. She complained of dizziness, headach, nausea and vomiting of her food. Her tongue was slightly coated, and her eyes and skin yellow. Her appetite occasionally pretty good—bowels flatulent and costive—pain, distress and swelling about the epigastric region. She discovered to me after some time, that she had been troubled for some months, with a profuse discharge of blood from the vagina, which she attributed to a blow she had received; but it was unaccompanied by pain, or any other local symptom. She was treated at first with laxatives, alteratives and mild tonics; and the difficulties in her head and stomach seemed much relieved. She took also preparations of iron and the Nitrate of Silver, but without any regularity. The discharge from the vagina lessened in quantity, but became of a purulent character and was extremely offensive. Her reason and strength gradually failed, and she finally sunk away in a low, muttering delirium. On examination the chief seat of disease was in the uterus—it was enlarged to the size of an ostrich's egg. Its walls were much thickened and had partly been changed into a hard, firm, knotty structure, and were partly dissolved into a thin, doughy substance by suppuration. It was connected by adhesions to the viscera about it; there were some marks of recent inflammation, and exudations of lymph scarcely organized. Between the uterus and a portion of small intestine was a small abscess which contained about half an ounce of pure pus; and between it and the rectum, another cavity containing half a gill of a thin, glairy, albuminous fluid, without any characteristic of pus. On each side of the uterus, and adhering to it was a tubercle, larger than a pigeon's egg, of a very firm structure, with streaks or white ligamentous bands intersecting it in many directions. The internal membrane of the organ was entirely disorganized, presenting large ulcerated surfaces, and having lost completely its healthy characteristics.

## CASE IV.

M. A. aged 67. This patient came under my care at the sequel of a severe Typhus fever. She was troubled with a bad cough after the other symptoms had abated and brought

up much mucus. She took the nitrate of silver, among other things, without advantage and finally died.

#### CASE V.

M. O'B. aged 37. Oct. 3d. In the fourth or fifth month of pregnancy. Pains all over her—cough oppressive and constant, raises a frothy mucus—vomits constantly, and has a relax. No appetite; strength gone; pulse 120, very feeble. Her symptoms were relieved by the common medicines which were employed till the 12th; she then began the nitrate of silver, one fourth of a grain three times a day, and continued it for ten days, when she was so much better as to leave off medicine. I am inclined to attribute some effect to the nitrate in this case, for although she had improved before commencing it, yet her amendment was more rapid afterwards. Still its effect was doubtful, as other remedies had been, and continued to be employed.

#### CASE VI.

S. R. aged 35. On this patient the whole *materia medica* had been exhausted in vain. Her complaints were anomalous and almost indescribable. She had been subject to acute, headaches, and pains in various other parts of her body—her lungs disordered, breathing laborious and asthmatic, with a dry hollow cough. Stomach and bowels always deranged; frequent vomiting with either costiveness or a relax, prolapsus ani, and piles—bearing down pains of the uterus, and profuse leucorrhœal discharge—catamenia irregular. She was put upon the pills of nitrate of silver about the middle of October, with a view principally to the leucorrhœa, which was then copious. After taking them about three weeks, beginning with one eighth and increasing to one fourth of a grain, she was much better in every respect, and has not been so well with regard to the discharge for many years. Jan. 1819. The leucorrhœa returned, but the nitrate of silver in doses of one third of a grain checked it again. She thinks it the first thing which has ever done her much good.

#### CASE VII.

J. F. aged 49. Has had several attacks of hemoptysis within a few years, and is constitutionally disposed to consumption. In October last he applied to me with symptoms of incipient

phthisis, for which, after a few other medicines, he took the nitrate of silver in doses of one fourth of a grain three times per day, but without benefit. As he could not be prevailed on to pursue any regular course of treatment, I only saw him occasionally till January 24th, when his symptoms had arrived at an alarming height. His cough was constant, and he expectorated daily a pint of puriform matter—he had hectic paroxysms which were more severe every other day, and regular night sweats—pulse 120. He consented to take the nitrate regularly three times a day, and used also the white mixture as a palliative for his cough, which he had been in the habit of doing for some months. By this treatment his night sweats were checked, his cough lessened, and expectoration diminished one half. His pulse were somewhat improved, he gained some appetite and seemed occasionally a little stronger. This improvement continued for about a fortnight, during which he took about a grain of the nitrate every day, but on the 10th of February he began to fail again, and died on the 13th.

**CASE VIII.**

R. H. aged 33. Oct. 30th. This would have been pronounced a case of confirmed and hopeless phthisis by any physician, and was indeed considered as such by those who had seen it. The patient was however a man of a naturally good constitution, though addicted to intemperance, and his complaints were first brought on by an external injury. At the above date, he had been sick several months—his cough was constant and urgent—bringing up from a pint to three half pints of matter daily, which had all the appearance of pus, and was extremely offensive, as was also his breath; his pulse were from 88 to 100—appetite pretty good—able as yet to set up—diarrhea—and most profuse night sweats. He had had all the usual palliative medicines, and the nitrate of silver had also been administered in small doses, though not very lately. He now took it again for a few days, in doses of one eighth of a grain and it completely stopped his night sweats—but his bowels being extremely relaxed and other symptoms very distressing, it was discontinued and other measures had recourse to. From this time till January 1819, his complaints advanced upon the whole. By means of very slight mercurials and opium his bowels were kept in order, and his cough rendered easier, though it continued to the same degree. He became much weaker—could no longer sit up—and his appetite failed. He took large quan-

tities of the white mixture, and at least three grains of opium every day ; yet his bowels remained open by the use of a grain of calomel with the opium, and he had every day one or two excellent stools. Once or twice his night sweats returned, but were checked by the use of the nitrate of silver in small doses. In the beginning of January he seemed sinking, and it was calculated that he would not continue through February. At this time I recommenced the nitrate, being obliged to it on account of the return of the sweats, and it was now continued for some time. He took successively pills containing one fourth, one third, two fifths, and one half of a grain ; on the 28th of the month he was so much better, that the white mixture, of which he used to take a six ounce bottle every four days, had not been renewed for a fortnight, and he had not had recourse to it for a week—his expectoration was almost nothing —his appetite ravenous—his pulse 76 to 34—he could sit up again which he had not done for a month.

February 11th. Continues to improve, has been out of doors and left off all medicine ; never coughs, but his pulse remain pretty quick.

March 10th. Has walked a quarter of a mile, pulse 80, his strength increases—no bad symptoms. By the middle of April he returned to his usual labour.

#### CASE IX.

M. H. aged 38. This subject had been troubled with a cough of some standing, when she was attacked Feb. 1 with pleurisy, which was relieved by the usual remedies, but the cough, with expectoration, continued. By the use of the nitrate of silver in doses of one fourth and one third of a grain, and some medicines to correct the state of her digestive organs, her symptoms were removed in the course of a few weeks.

#### CASE X.

A. A. aged 40. The principal difficulty in this case was a profuse leucorrhœa, which had existed for three years, and originated, as she supposed, in consequence of a fall which she had while pregnant. She took pills of nitrate of silver, in doses of from one fourth to one half of a grain, for about eight weeks, with considerable benefit both to her general health and to the leucorrhœal discharge.

**CASE XI.**

L. M. aged 34. This was another case of leucorrhœa, in which the nitrate was tried without effect, but was much benefited by cathartic medicines.

**CASE XII.**

M. R. aged 40. Has been much afflicted with leucorrhœa for some time; her catamenia are very irregular and alternate with the mucous discharge. She has been very intemperate, and is unmarried. Being somewhat deranged in her stomach and bowels, she first took medicines intended to get them into a better state, which was effected, but without any improvement as to the discharge. She then began with one third of a grain of the nitrate three times a day, and increased the dose to one half. In the course of ten days the discharge almost entirely ceased, and her health and appetite were much improved.\*

**CASE XIII.**

C. B. aged 20. She had been sick three months when she applied to me, and appeared considerably advanced in phthisis. Her cough was constant, her voice lost in a great measure, pulse

\* She had complained much of a swelling of her bowels, which was extremely variable in degree at different times, and could not be accounted for, so far as I could ascertain, upon the supposition of wind in the intestines. Upon questioning her closely, she told me that she had been troubled for some years with an occasional discharge of wind from the vagina, after passing her urine. At present it happened almost every time she made water, and came away, as she expressed it, with a kind of a pop. She was of opinion herself that it came from the bladder, and I was finally convinced that this was probably the case. It never took place except when she passed her urine, and never till she had done passing it. This was what would be expected if it proceeded from the bladder, since its specific gravity would cause the water to be evacuated before the flatus could be discharged—but if from the uterus we should expect it to be voided at any time without reference to the evacuation of the urine, as appears to have been the case in the instances related by Mr. Hunter. The air had no smell, was ejected with considerable force, and if it did not come away with each discharge of urine caused a good deal of uneasiness. I recommended her, when much distressed, to have the catheter introduced and thus allow the air to make its way out, but she did not care to have the experiment made. On meeting her in the street within a few days, she informed me that her leucorrhœal discharge has not returned, and that she is not now troubled by the evacuation of air.

120 weak and wiry—pain in her side and epigastrium—stomach and bowels much deranged, and she was able to keep no food down. Her expectoration copious, and tending to pus. After a variety of medicines which gave no relief, Feb. 26th, began the nitrate of silver, and directed her to take one pill containing one fourth of a grain, three times a day.

March 1. She has taken only two pills, is very poorly—pulse 120, very feeble, throws up her food, to take four pills a day.

3d. Found her more comfortable; pulse 100—harder; has kept down a little food.

6th. Not so well; takes the pills very irregularly—increase to one third of a grain in each.

8th. Has taken them pretty well, pulse 92. Increase to three eighths.

10th. No pills for two days—pulse 120; much worse, throws up every thing she takes into her stomach.

12th. Has taken her pills since the 10th and has kept down her food; pulse 100.

15th. Much better, has had her pills regularly; has an appetite, and keeps down her food. Increase to half a grain.

21st. Has omitted pills three days; not so well.

25th. Better again; keeps down her food.

Soon after this, she refused to take her medicine, asserting that it did her no good, and that it gripped and distressed her. I had strong hopes that she would have been permanently benefited by it, had she taken it regularly; and thought that she derived some advantage from it, whenever she could be prevailed upon to follow the directions which were given her. But she was obstinate and wilful and every external circumstance was against her. Being obliged to lie upon the floor with a mere rug beneath her, and exposed to the inclemency of the season in a leaky house, without sufficient firing or clothing, she had to contend against evils as great as her disease, and was finally, though almost in a dying state, transferred to the Almshouse.

#### CASE XIV.

M. B. An old asthmatic case, aged 58. She was troubled with considerable cough, expectoration of a purulent matter—hectic paroxysms—nausea and vomiting of her food. She began with one fourth of a grain three times a day, and increased after two dozen pills had been taken, to one third of a grain. In a few weeks, under its use, she recovered her

strength and appetite to a considerable degree, and her cough was less than it had been for some time.

**CASE XV.**

R. W. This was an intemperate subject, who had been given over in a consumption several times. Has frequent attacks of hemoptysis, and is troubled with an habitual cough. He had an attack of delirium tremens in February, which left him worse as it respected his pulmonary complaints, so that I tried him for about four weeks with the nitrate of silver, beginning with one fourth of a grain, and increasing to one grain three times a day. For a short time his cough and appetite were much improved, and he seemed to gain ground; but his complaints soon became stationary and made no further progress towards amendment.

**CASE XVI.**

J. B. aged 36. Much addicted to intemperance. Had been affected with inflammation in the chest for several days before I saw him—pain in the side violent, pulse 120, hard, small—expectoration copious. By the ordinary medicines his symptoms were relieved in a considerable degree, but the case threatened to terminate in phthisis. The pain in the side, cough and expectoration continued in spite of repeated blistering and other medicines; he had no appetite, and exhibited many signs of approaching hectic. After an attendance of about a week, I commenced with the nitrate of silver, gradually increasing the dose from one fourth to one third and one half of a grain three times a day; and under its use his symptoms disappeared in about a fortnight.

These are most of the cases in which I have made use of the nitrate of silver; there have been a few in which I have commenced giving it, but where some circumstance has prevented it from being pursued to any extent, or I have not been able to know the result. There are also a few patients who are now using it. I thought it much fairer to give an account of all the cases, than to select those in which it had been decidedly beneficial, as seems to have been done by Dr. Balfour, since this method can never enable us to judge correctly of the real power of the medicine. It is much more for the advantage and improvement of medical science, to investigate the general operation of any article upon the different organs and functions, and

thus to acquire some knowledge of its influence over their diseased states ; than to administer it at random, and record only those cases in which it seems to have been employed with success. Yet, to acquire this knowledge of the general powers of an article, requires a long and careful observation of its effects in various states of disease.

In many of the cases which have been related, no effect whatever appeared to be produced by the remedy, and in many others it seemed to be uncertain whether the amendment proceeded from the treatment, or from the spontaneous efforts of the constitution ; still we have the same evidence for its efficacy, that there is for the efficacy of any other article. In some instances the failure might be attributed to the smallness of the dose, or the too little time during which the experiment continued. I found in only one instance any unpleasant effect from its use even in the largest doses--and in one not recorded here, the patient took to the amount of four grains in every twenty four hours--in the case referred to, the subject complained of considerable griping, which probably proceeded from the nitrate of silver.

It never seemed to produce any effect in a less dose than one fourth of a grain, and seldom was of service till at least one third or one half a grain were given at once ; and at length I was in the habit of increasing the quantity very soon to one half of a grain, allowing only a day or two for the purpose of ascertaining how the stomach was affected by smaller doses. It appeared very likely, that in the minute portions of one sixteenth or one eighth of a grain, the muriate of soda, which is so universally present in all the fluids of the body, immediately decomposed the nitrate and formed the muriate of silver. This might perhaps be the reason why, in these doses, the medicine possessed no more power. Yet it is not improbable, that in all cases, the same decomposition takes place, such is the quantity of fluid to which the medicine would be immediately exposed, and that the effects are in fact produced by the muriate of silver. This however might be made the subject of experiment.

The medicine was always given in pills and was combined with other substances according to circumstances ; generally with about half a grain of rhubarb to each pill ; but sometimes with aloes, where there was any tendency to costiveness ; or with opium, if the bowels were relaxed, or any other symptom required it. I however, took such precautions as enabled me in general to judge, how much should be ascribed to other articles, and how much to the nitrate of silver. It seemed desirable, that it should be administered as much by itself

as possible, and nothing else was given that could be avoided, except such medicines as were necessary to keep the digestive system in order, without an attention to which no article seems capable of producing its proper effect. Indeed, the Nitrate itself appeared to have some beneficial effect upon the stomach, since during its use, some of the patients were able to retain their food, and had an increase of appetite, although previously they had constantly thrown up their meals, and had little, or no inclination for food. Upon the bowels, I could discover no effect whatever, either as to the number, quantity, or quality of the discharges.

It will be observed in looking over the cases which have been related, that patients with complaints of a phthisical tendency, and with leucorrhea, are those which seem to have been principally benefited by the use of this article. In some of these the amendment was striking and visible, and could be ascribed to nothing but the nitrate of silver. Case eighth affords an example of recovery from a state of disease, which few physicians would have hesitated to pronounce desperate, and such indeed was the opinion of several who occasionally saw the patient during his sickness. Yet this was a favourable case ; for the subject was naturally of a firm constitution, without any predisposition to phthisis, and his complaints arose also from an external injury, and were not the result of a previous tendency in the system.

In leucorrhea, the benefit derived from the use of this article was undoubted, and appeared to me greater than that resulting from any other treatment, which I had employed. In only one case did it fail of producing some beneficial effect, and in that one it was hardly taken for a sufficient length of time, or with the regularity necessary to secure its proper success.

Physicians can best draw their own conclusions from what has been related, with respect to the value of the nitrate of silver as a remedy. The cases are given at length, that every one may be able to judge for himself, and I have endeavoured not to ascribe any undue importance to the article in question. It would seem at least to be a subject worthy of investigation, and it certainly promises, in some cases, to be an important remedy. What those cases are, to which it is particularly adapted, will require some farther observation. It has no claim to very eminent or specific virtues, yet it would seem to be worthy of trial in cases of phthisis deemed incurable, since those may occasionally occur in which it will prove serviceable. It might at least be of use in checking profuse night sweats ; since its influ-

ence upon these was very immediate and striking in the most remarkable case just referred to, and likewise in others, where its ultimate effects were not so important.

Boston, May, 1819.

### *Extraordinary case of Dropsy.*

To the Editors of the New England Journal of Medicine and Surgery.

GENTLEMEN,—The subject in this case, was a Mrs. Blasdell of this town. At the commencement of the disorder, she was thirty-three years old, she was the mother of one child, and her habits were perfectly regular and temperate.

For a year previous to the first operation, the symptoms of the disease frequently appeared, and as often vanished; and it was uncertain whether Dropsy would finally take place or not. Until about the year 1814, she was able to visit her friends, and take charge of her family: for the remainder of the time, she was confined to her chamber;—she died a few days after the last operation. Mrs. B. was under the care of Dr. William Cutter of this town, until his death in May 1817, from that time, under my own.

Yours, &c.

AMMI R. CUTTER.

The schedule annexed will show the dates, and number of operations, together with the quantity in pounds.

Dates	No. of operations.	Quantity in lbs.
1805 Nov. 5 to 1806 Dec. 19	6	245 $\frac{1}{4}$
1806 Dec. 19 to 1807 Nov. 20	5	197 $\frac{1}{4}$
1807 Nov. 20 to 1808 Dec. 5	9	417 $\frac{3}{4}$
1808 Dec. 5 to 1809 Dec. 5	10	476 $\frac{1}{4}$
1809 Dec. 5 to 1810 Dec. 24	12	567
1810 Dec. 24 to 1811 Dec. 23	13	659
1811 Dec. 23 to 1812 Dec. 7	14	728
1812 Dec. 7 to 1813 Dec. 15	17	906
1813 Dec. 15 to 1814 Dec. 29	21	1007
1814 Dec. 29 to 1815 Dec. 26	22	1026
1815 Dec. 26 to 1816 Dec. 30	22	857 $\frac{1}{2}$
1816 Dec. 30 to 1817 Dec. 26	24	914 $\frac{1}{2}$
1817 Dec. 26 to 1818 Dec. 29	24	753 $\frac{1}{4}$
1818 Dec. 29 to 1819 April 2	6	162 $\frac{1}{4}$
13 years 5 months 3 days	205	3918

Portsmouth, (N. H.) May 19, 1819.

Vol. VIII.

*General Reflections on Fistulae, and on the Formation of an accidental Membrane in their Course ; followed by some Observations collected from the Clinical Lectures of Professor DUPUYTREN on the different Species of Maladies of this kind, and on the particular Mode of Treatment adapted for them.* By M. BRESCHET, Prosector to the Faculty of Medicine of Paris, and First Clinical Assistant at the Hôtel Dieu.

[From the Journal Universel des Sciences Medicale, June 1818.]

**W**E passed over this Memoir in our History of the Progress of Medicine, from the consideration that it comprised but little information of absolute novelty ; but, on further reflection, we have judged that it may prove useful to many of our readers, as a development of some opinions advanced by MR. HUNTER, which do not appear to have been sufficiently reflected on by surgeons in general.

"The term *fistula*, in its more general acceptation, designates a *deep sinous ulcer*, with *callous edges*, *communicating with the external surface or an internal cavity by means of a narrow opening*; and from which a quantity of *purulent matter is evacuated disproportionate to the extent of the ulcer*. As soon as matter of any kind, whether a recrementitious, excrementitious, or gazeous, fluid, from causes which it is unnecessary to consider in this place, happens to desert its natural course, the tissue in which this matter is diffused becomes the seat of inflammation. This inflammation is violent in degree in direct relation to the more or less irritating qualities of the fluid, and the excitability of the parts with which it has accidentally come into contact.

In consequence of the irritation produced by the presence or passage of this fluid or gas, which acts as a foreign matter, suppuration in the parts subject to its influence becomes established. The abscess opens sooner or later, either externally or into an internal cavity, according to varieties in the natural efforts or the artificial measures that have been employed. The purulent matter evacuated always presents some of the characters of the liquid that determined its formation, which escapes in combination with it, in a greater or less quantity. The continual passage of these fluids produces, in the surfaces of the artificial passage thus established, a permanent irritation that is sufficient to prevent the cicatrization of its parieties.

The presence of an animal fluid in any part not destined by nature for its reception, is then the cause both of the establishment and of the perpetuation of fistulous canals.

We shall not be surprised at such a result, if we reflect that milk, a fluid apparently so mild and incapable of producing irritation, induces violent inflammation, often terminating in suppuration and even gangrene, when it is injected into the interstices of the cellular membrane. Thus, a substance which, when applied to the mucous membrane of the digestive organs of an infant, only causes the degree of irritation necessary to affect its assimilation, becomes, in a part, the sensibility of which has not a due relation to its properties, an active morbid cause, in consequence of the extreme degree of irritation that it provokes.

There is no tissue nor organ of the animal economy, in the substance of which fistulæ may not be found. Thus, we have seen them traverse muscles, aponeuroses, and tendons, as well as the cellular and cutaneous structures. The viscera are not exempt from them ; we frequently witness them in the parenchymatous organs, and occasionally in the brain.

It is, however, the cellular tissue in which they are most frequently observed, either in consequence of the ready passage it affords for liquids, or from the general distribution of this structure throughout the body. This tissue is, indeed, universally diffused ; it is interwoven throughout every part, and enters, as an element, into the composition of every organ. In some instances, it serves as a medium of connexion between several other tissues, which by their union compose a single organ ; in others, it establishes limits to the respective viscera, muscles, &c. and supplies them with particular or common envelopments. It is very abundant about the excretory canals, around which it forms cellular sheaths ; and presents varieties in its particular texture according to the functions it is designed to perform. For instance, were fat to accumulate in the vicinity of the mucous canals, it might lessen or totally obstruct their passage ; and therefore it is of a filamentous texture in those situations, not having that degree of laxity which admits of the accumulation of animal oil in its interstices. In consequence of such a disposition, that tissue favours the formation of excretory canals, and does not offer obstacles to their dilatation.

As soon as an animal fluid, having deserted its natural course, becomes accumulated or passes into this tissue, all the phenomena ensue that accompany the irritation which we have described. But this irritation also causes a remarkable change in the nutritive functions of that structure ; the surface of it which is in contact with the effused fluid becomes converted into a membrane very analogous to the common mucous membranes.

After the irritation has existed for a considerable period of time, and has attained a greater degree of intensity, it also induces a further change in the accidental membrane we have described, which possesses that character ordinarily termed *callosity*.

According to Dr. BAILLIE,\* the celebrated HUNTER long since observed, in his *Surgical Lectures*, "that the internal surface of fistulae have an appearance similar to that of a secretory membrane, and which may be compared with that of the urethra.† This important observation seems to have had little influence on the minds of practitioners for a considerable period; but the great progress that has been lately made in pathological knowledge, and the frequent opportunities possessed of examining dead bodies, have verified and generalized the proposition of the English anatomist."

I shall adduce the following as one among the numerous facts which tend to substantiate the abode statement:—

A young man, 20 years of age, had for some days perceived an indolent fluctuating tumour in the left groin, without discoloration of the skin, which disappeared after he had remained for some time in the horizontal posture. It was evidently a collection of matter transmitted to it from some other part. It burst spontaneously, giving exit to a considerable quantity of fetid purulent matter. The pains which the patient had suffered about the vertebrae before the formation of the tumor in the groin, and which continued after it had opened, with the nature of the matter evacuated, clearly pointed out the primary disease to be caries of the vertebrae. The patient lived about two months after this time. The following were the appearances noticed on the examination of the body:—The lower dorsal and two upper lumbar vertebrae were in a carious state. A membranous canal, about an inch in diameter, extended from that part to the opening in the groin, the internal surface of which was of a bright red colour. Blood could be squeezed from it by pressure, the same as from a mucous membrane in a state of irritation. The surface of this canal was covered with

\* See his *Morbid Anatomy*.

† "We find something analogous to this in the Treatise of Mr. Hunter on the *Blood, Inflammation, and Gun-shot Wounds*; but there is a wide difference between a mere assertion and the demonstration and complete history of the organization of a part. However, we shall transcribe the passage referred to:—

"I believe that a deep wound, such as that from a gun-shot, on proceeding to suppuration and forming a fistulous ulcer, becomes in some degree analogous to an excretory canal, having the power of producing peristaltic motions from the bottom to the external opening."

purulent matter, which was furnished both by the parts about the carious bones and its own internal membrane that was irritated by the constant passage of the acrid purulent matter from the former source. It was easy to separate the artificial membrane which formed this surface, in the same manner as the internal membrane of the stomach may be rendered distinct, by dissection.

From the preceding observations, and other analogous considerations, it would appear that there can be no doubt respecting the nature of the adventitious membrane formed in fistulae. If we now revert to the general theory of fistulous passages, we shall be obliged to admit that the present state of our knowledge of pathological anatomy would lead us to consider these diseases as dependant on the formation of an accidental tissue, which, by its organization, properties, and functions, has the strictest analogy with the natural mucous membranes.

Let us, then, enter into a general consideration of the seat, development, organization, properties, and functions, of this adventitious mucous structure.

1. It has been seen that fistulae may be formed in all the different tissues of the animal economy, but that they most frequently are seated in the cellular membrane, which is that most extensively distributed throughout the body. This membrane is found thickly dispersed about the margin of the anus, in the perinaeum, around the sténoid duct, &c.; which are the situations where fistulous ulcers most commonly appear.

2. The formation of the adventitious mucous membrane takes place, with more or less rapidity, in a direct ratio to the greater or less violence of the irritation of the tissue throughout which the extraneous fluid is diffused. The irritation is, however, not proportionate in extent to the apparent properties of the effused fluids; and it also varies in consequence of the different degrees of susceptibility of the parts affected.

The cellular membrane, in all cases, assumes in the first instance an ulcerated aspect, and furnishes a greater or less quantity of purulent matter. After this, it gradually evinces some peculiar character. It becomes red, in consequence of increased vascularity; its vital properties are exalted; the nutritive functions of the parts are changed; its density is augmented; and, finally, its appearance has become entirely changed. By means of these successive modifications, it assumes the state of a red villous membrane; differing not only from the cellular tissue, which is arranged in areola; and the serous membranes,

which are diaphanous and constantly disposed in the form of close pouches; but also from all the other species of structure that enter into the formation of the animal economy. In proportion as it is developed, it becomes more and more similar to the mucous membranes. The pus furnished by its internal surface is succeeded by a mucous secretion, which is more abundant as the new membrane produces less of purulent matter. A period at length arrives when it ceases to form the mucous secretion, which may be readily discovered by preventing the fluids that originally induced it from passing through the canal that it forms.

This canal, by means of its internal surface, is connected with these fluids, and the mucous secreted by the adventitious membrane; on its external surface, it forms a boundary to the surrounding parts, from which it is, however, separated by a layer of cellular membrane that varies in point of thickness. Superiorly, it commences from a natural excretory orifice, or some surface presenting the conditions proper to constitute a fistulous ulcer; and, lastly, it constantly terminates inferiorly on some one of the cutaneous or mucous surfaces.

3. The organic elements of the adventitious membranes of fistulae have the greatest analogy with those of the mucous membranes. This membrane is separated from the surrounding parts by a greater or less extent of cellular tissue, which may be termed *sub-mucous*; and it contains a portion of that structure in its composition, as may be demonstrated by maceration. Its redness discovers the presence of a large quantity of blood-vessels that terminate on its surface by exhalants, the existence of which is shown by the secretion of fluids. Since nutrition is performed in this membrane, we cannot doubt that it contains absorbent vessels. But it is only by means of new researches that we shall be able to determine, in a precise manner, the respective proportions of the different vessels that enter into its composition.

Notwithstanding these traits of analogy, the adventitious membranes of fistulae differ from the natural mucous membranes in so remarkable a degree as to prevent the admission of their perfect identity.

In the first place, the adventitious membrane wants that cuticle that is observed on the exposed surfaces of the mucous membranes of the lungs, digestive organs, &c. Besides which, it does not contain those glandular bodies, termed *mucous follicles*, that are dispersed throughout the primitive mucous membranes, and secrete a viscous fluid destined to lubricate their surfaces.

These are not the only differences of organization noticed by the attentive observer between the accidental and natural mucous canals. There is a constant tendency to the obliteration of the former, as soon as the passage of the fluid through them is intercepted ; whilst in the latter, under similar circumstances, such an occurrence is never, or very rarely, observed. For example, compare an old fistula, of whatever kind, provided it is still susceptible of being cured, with what is observed in cases of preternatural anus, and these different results will be very evident. We shall sooner or later succeed in effacing a fistulous canal, after having diverted from it the passage of the fluids by which it was produced, (the effecting of which, we may observe in passing, is the basis of the treatment of those diseases ; but, in the preternatural anus, on the contrary, although the whole of the faecal matter may pass through the accidental opening, the inferior part of the intestinal canal does not become obliterated, but continues to furnish a greater or less quantity of mucous matter.

This difference with respect to the facility of obliteration of canals formed by accident, and the almost constant impossibility of effecting it in those which are lined with natural mucous membranes, shows what little expectation should be formed of the permanence of canals formed in these tissues ; and how preferable are natural to artificial views in the treatment of many diseases of those parts : that is to say, those which re-establish the primitive course of fluids, to those which effect new and artificial modes of transmitting them. It is in consequence of this that passages formed through the prostate gland, by means of conical sounds, only remain as long as they are kept open by the presence of the instrument. It is from this, also, that practitioners have ceased to employ the methods of Woodhouse, Hunter, Monro, &c. for the treatment of fistula lacrymalis, and adopt that by which they endeavour to restore the natural passage of the tears. However, nothing is more common than to witness the return of that disease, when it has been supposed to have been cured by a long-continued use of tubes, bougies, &c. ; but this arises from the disorder, in these cases depending less on a contraction of the soft parts, or excretory ducts, than on that of the hard parts surrounding those passages. What proves this is, that the insertion of metallic canulae, which offer more resistance to the bony parieties than the mucous membranes, is sufficient for a prompt and radical cure of a malady too often rebellious to all the efforts of the most able surgeons, before they had recourse to canulae that were permitted to remain in the parts, the advantages of which were

long since pointed out by M. Dupuytren ; and by means of these he has cured many hundreds of cases, for which all the ordinary methods had been employed in vain.

4. The vital properties and functions of the adventitious membrane formed in fistulous passages, much resemble those of the tissue to which we have compared it with respect to its organization. This membrane possesses various degrees of sensibility. Sometimes the introduction of a probe or sound into a fistula is productive of severe pain ; whilst, at others, the presence of those instruments is more readily borne. We have observed that this membrane secretes a mucous matter, which at first is mingled with pus, but afterwards flows away perfectly pure ; and finally ceases to be secreted, if we divert from it the fluid or other matters that had induced it : were it not for this, we could not hope to effect the obliteration of the fistulous canal.

After having given a rapid, though exact, history of the internal membrane of fistulae, it remains for us to ascertain, more correctly than we have hitherto done, the nature of the *callosities*, the production of which we have attributed to the permanence of the local irritation, kept up either by means of the fluid that constantly passes over the membrane, or by various external causes,—such as certain topical applications, exercise on horseback in cases of fistulae about the anus and urinary passages, &c.

These *callosities* have a whitish appearance, and seem to be the result of congestion of colourless fluids in the membrane and subjacent cellular tissue. Formerly they were considered to be of a schirrous, or even cancerous, nature ; and these erroneous notions gave rise to injurious measures in the surgical treatment of this disease. Experience has shown that rest, emollient applications, and appropriate dressing carefully applied, will, in the greater number of instances, effect their removal. According to the present received ideas respecting cancerous affections, and the treatment that should be opposed to them, it will be readily perceived that they differ in every respect from the callosities of fistulae.

By a judicious use of the measures I shall presently point out, we may almost always spare the patient an operation, which, although generally exempt from danger, is productive nevertheless of severe pain, and frequently gives rise to very unpleasant consequences. I allude to the treatment of fistula by extirpation, a cruel operation no longer practised, or at least only adopted in places remote from the centres of acquisition

in knowledge, and by persons governed by prejudices, or ignorant of the progress of the art of surgery.

A simple operation is now generally substituted in the place of extirpation, which is executed in various ways, subordinate to accidental circumstances and the particular inclinations of the surgeon. These consist, in all cases, in re-establishing or dilating the natural passages, in dividing or compressing the fistulous canal throughout its whole length, so as to give a free issue to the pus, and to oppose the passage of liquids, aeriform matters, or fluids, in the accidental canal; the bottom of which should be the first part that should become united. They have also another object, that of removing external extraneous substances, and favouring the separation and entire removal of those formed in the diseased tissues.

Fistulous passages differ considerably, according to the laxity, organization, and nature, of the cellular tissue in which they are developed. They vary also in the disposition and direction which they assume. Thus, they do not always extend in a right line; and often form numerous sinuses, terminating in more extensive cavities. The accumulation of fluids in the latter gives a complicated character to the disease, and renders the treatment of it tedious, in consequence of the difficulty experienced in the discovery of these cavities, and the means of arriving at them. These complications depend on the same causes as the principal disease. The retained fluids, also, according to their nature, are productive of inflammation, and the numerous and various consequences that the practice of surgery daily offers to our observation.

We may, I believe, conclude from what has been stated—

1. That fistulae are accidental canals, kept up by the continual passage of excrementitious substances, purulent matter, the liquids coming from secretory organs, or gazeous fluids, which produce irritation of their surfaces and prevent their adhesion.
2. That one of the extremities of fistulous passages constantly receives or produces the cause of the irritation that perpetuates their existence.
3. That it is to the knowledge of this cause that the practitioner should direct his attention, if he would employ a rational and efficacious mode of treatment.
4. That there is always the formation of a tissue of a particular nature in fistulous passages, more analogous to the mucous membranes than any other species of structure.
5. That, in some cases, this tissue is the only existing organic alteration; and this is what is commonly observed in simple fistulae.

6. That, in many other cases, there exists at the same time a degeneration of the cellular structure and adjacent parts ; a degeneration which we should be careful not to consider as the cause of the fistula, nor to confound with schirrous, cancerous or carcinomatous, affections, from which it essentially differs.

7. That the removal of the parts thus degenerated will not remedy the cause of the fistula ; it only destroys one of its effects that would generally disappear spontaneously after the cause of it had ceased to exist.

8. That the indications for the treatment of this malady are to prevent the formation of pus, or at least the flow of it through the fistulous passage ; to re-establish the course of the fluids or secretions through their natural channels ; and to prevent the escape of air by the opening that communicates with one of the extremities of the fistula.

9. Lastly, that, after the causes are removed, we may obliterate the fistulous passage, by dividing it throughout its whole extent ; by the use of compression ; or by exciting, by means of caustics or irritating injections, such an inflammation of its parietes as may induce their mutual adhesion."

*Lond. Med. and Phys. Journal.*

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*Obstetrical Observations and Reflections ; by W. HAMILTON,  
M. D.*

[From the London Medical and Physical Journal.]

**O**N perusing the critical department in the 237th Number of your useful Journal, I was much pleased with your notice of the excellent report of Dr. Clarke, of the Lying-in Hospital, Dublin. His practical observations on the result of upwards of ten thousand cases of midwifery are valuable indeed, and ought to make a very deep and lasting impression on the junior practitioners of that useful art ; particularly at a time like the present, when unfortunate cases are more frequent than has been observed for years.

In his remarks on ordinary cases of labour, he is persuaded that it greatly contributes both to the safety of the mother and child, to allow the uterus *gradually* to empty itself during labour ; and, with a view to secure its more perfect contraction, he has been for years in the habit of pursuing the fundus uteri with a hand on the abdomen, till the foetus be expelled. Such pressure also tends much to prevent profuse haemorrhage, syncope, or retained placenta, &c. Here, in conformity of this

practice, I would beg leave to call the attention of practitioners more generally to this plan; as I have also, for years repeatedly witnessed its utility, often with the most agreeable surprise; not unfrequently delivering in a few minutes a lingering or laborious case, which had occupied the attention of the midwife for days, without any other assistance than the application of the left hand to the tumor of the abdomen (using as much pressure as the nature of the case required) during the pain, while with the right the progress of the foetus was observed. This simple practice not only does away the use of all the different methods of many practitioners here, of using towels and bandages, of different forms, girt round the abdomen; but will, in general, be found sufficient to render the vectis and forceps almost useless: or, as Dr. Clarke justly observes, "it is so long since he has had occasion to use them in private practice, that he is persuaded a fair opportunity of doing it with advantage does not occur once in a thousand cases;" even in the hospital they were used only about once in eight hundred.

As we are taught that most of those sudden and alarming deaths which succeed natural labours are attributable to the sudden collapse of the larger blood-vessels, on the removal of the abdominal pressure, I am in the habit of ordering the hand of an assistant to be kept on the body till some time after the placenta be expelled; and the patient generally expresses herself much satisfied with the support it affords. Of this description, I have only met with one case in nearly six hundred; and even here it was more from an adherent placenta, as the uterus never contracted after its removal:—syncope succeeding, with convulsions, indicating internal haemorrhage, soon terminated the melancholy scene.

In another instance, recently, where the patient had a very quick and favourable labour, the same untoward symptoms succeeded a few minutes after the natural expulsion of the placenta and threatened for several hours immediate dissolution, notwithstanding the free use of brandy, opium, ether, hartshorn, &c. &c. Still, as was evident afterwards, the abdominal pressure, and stimulating contractions of the uterine region, alone saved her; as, on the succeeding day, a mass of coagula, nearly as large as the whole volume of the child, was expelled.

The beneficial effect of this practice was rendered still more obvious by the speedy recovery of a late patient from the worst species of placental presentation, between the eighth and ninth month of pregnancy. She had been flooding profusely at intervals for three days, under the management of a very experienced midwife, who kept anxiously waiting the advancement of the child, or the appearance of pains; neither of which succeeding, and the sufferer nearly exhausted, fainting and scarce-

ly able to articulate from the great loss, the right hand (the left being placed on the abdomen) was introduced, and with some difficulty passed through the centre of the placenta, ruptured the membranes, found the child even above the projection of the spine ? brought down the feet and delivered her, at the interval of three or four pains, of a fine living male child. Continuing the hand on her body, supporting and contracting it occasionally, the after-birth soon followed ; and it was remarked that neither syncope nor loss of blood succeeded ; and her subsequent recovery was as quick as from her former confinements.

As it is equally evident that the pressure and support here recommended are as proper, as it is clear that the general cause of these sudden deaths is want of contraction, and consequent internal haemorrhage, it is unnecessary for me to add farther examples. I shall, therefore, conclude for the present, by begging leave to recommend the subject to the serious attention of your practical readers, in hopes this dangerous description of cases may become as rare as the puerperal peritonitis is now rendered, by the exhibition of a few large doses of calomel, as formerly recommended.

*Ipswich ; Nov. 12, 1818.*

### *Historical Sketch of the Progress of Medical Science.*

#### SURGERY.

[From the London Medical and Physical Journal.]

THE question respecting the possibility of curing Syphilis without the use of mercury, must be considered as one of the highest importance in the practice of SURGERY. It is a question that has been frequently agitated since the period at which that disease is generally supposed to have first appeared in Europe ; but it is only lately that it has led to investigations which, from the mode in which they are conducted, must (whether or not the opinion in the affirmative be well founded) be productive of the most interesting results. We have already been taught to form a more accurate diagnosis between syphilis and those diseases which, on more imperfect observation, have been considered to resemble it ; we have also been taught that various constitutional symptoms,—as ulcers of the throat, eruptive disorders, nodes, and other affections of the bones,—will ensue from ulcers on the genitals contracted in coition, but which are distinct from that disease, and are curable without mercury, although they may, in their latter stages particularly, be much alleviated by that remedy ; a circumstance which,

from a false mode of reasoning often adopted, had added much to the obscurity in which this subject has been enveloped. And, what is of almost equal importance, it has been ascertained that syphilis is at present of such rare occurrence, that it forms a very small proportion of the number of those ulcerative diseases of the genital organs which we have daily occasion to witness.

The writers on this subject, whose observations and opinions will engage our chief attention, are Mr. CARMICHAEL and Mr. HENNEN; both gentlemen whose opportunities for observation of facts are very extensive, and whose talents are peculiarly well adapted for the investigation of this intricate subject.

Our readers, we presume, must be acquainted with the opinions which Mr. Carmichael published on this subject a short time since: in a work by that gentleman which has recently appeared,\* he expresses a disposition to relinquish that one of them which is the most important in a practical point of view—that syphilis differs from other venereal diseases in not being curable without mercury. This he is disposed to do, from the powerful testimony to the contrary adduced by Mr. Guthrie, Mr. Hennen, and Mr. Rose; and also from facts which have occurred to his own observation since the period of the publication of his former work. Since then, to the date of the present one (July 1818), he has only seen three cases of syphilitic primary ulcer on the genitals: one of which occurred in a gentleman who was desirous to try whether or not it could be induced to heal without the use of mercury. Under these circumstances it remained stationary for a month, after which mercury was employed. Of the other patients, one of them came into the hospital after the primary ulcer had existed four months: it had for some time been accompanied with eruptions; the ulceration and eruptions had been extending the last month. Sarsaparilla was at this time freely exhibited: shortly after the commencement of its use, the callosity round the ulcer began to diminish and the eruptions to decline; and, at the period at which this report was published (the fifth month of the disease), the callosity was entirely removed, and the eruption so far diminished as to leave no doubt in the mind of the author of its entire disappearance, without the use of any other remedy. The other case was an ulcer of the dorsum penis, accompanied with eruptions, and pain and tenderness of the bones and joints. Sarsaparilla was given. The ulcer soon began to

\* *Observations on the Symptoms and specific Distinctions of the Venereal Diseases.*

assume a healthy appearance in the middle, the eruptions and pains declined, and the sore, at the period at which this report was published, was "all but healed."

We are unable to compare with precision the conclusions which naturally follow from the consideration of the above observations of Mr. Carmichael, with those deduced by Mr. Hennen from his experience among the soldiers in Edinburgh castle. Since Mr. Carmichael, in his extensive practice in Dublin during so long a period, has only witnessed three cases considered by him as syphilis; and Mr. Hennen classes twenty out of 105 as cases of Hunterian chancre; it is apparently evident that those gentlemen do not agree in the characteristics which are by them considered as designative of the true syphilitic ulcer. Of the twenty cases of Hunterian chancre above referred to, nine were followed by secondary symptoms: of which, four were instances of tubercular, three of exanthematous, and one of pustular, eruptions; and one of tubercular eruptions, with ulcerated throat. As this account is taken from a tabular view of the results of the cases treated without mercury, in which particular descriptions of the symptoms are not detailed, we can only consider them as specimens of true syphilitic secondary symptoms, from such being the opinion of Mr. Hennen; but we are disposed to remark, that Mr. Carmichael has satisfactorily ascertained that *tubercular* eruptions appearing subsequently to ulcers on the genitals, do not prove the latter to have been syphilitic, although some time since so considered. This opinion is confirmed by the observations of Dr. BATEMAN, who has described a similar eruption arising from other diseases. This tubercular eruption, Mr. Carmichael observes, may be distinguished from syphilis, by the spots being smooth, of a small size, and rounded or much raised in the centre: whereas, the lepra syphilitica is directly the reverse; being scaly, in general of a large size, and always more raised at the circumference than at the centre.

The secondary symptoms observed by Mr. Hennen occurred more frequently, and at an earlier and more determinate period, than in cases in general in which mercury had been used; but they, in many cases, disappeared as soon; never, as has been supposed, proceeding from bad to worse, or from one succession of parts to another with unabated violence: on the contrary, they by no means exhibited the same violent and unrelenting symptoms which are observed in many instances where mercury had been employed. The eruptions did not run into ulceration, nor form into large scabs and blotches; nor were the bones of the nose or other parts, *in any instances*, affected

with caries, in the many hundred cases watched by him with the utmost anxiety. These observations involve the investigation of this question in extreme perplexity. It appears so remarkable a circumstance, and one which it is so difficult to explain, how it happens that the disease, when its progress is not interfered with by the influence of mercury, should not in any instance have assumed that form so particularly insisted on by Mr. Hunter, as its diagnostic character,—the regular progressive and never retrogressive course of the disease through its different stages from bad to worse, where mercury is not employed.

The non-appearance of caries of the bones, in any instance, would oblige us to attribute that affection to the influence of mercury; but such an effect is never witnessed from it when exhibited for other diseases when those parts are not affected, in equal quantities, and for a very long-continued period. The only way left to explain this is, that it is solely when disease previously existed in those parts, that mercury exercises this deleterious power. Such an opinion receives some degree of support from the diseases which ensue from the use of that mineral, when those parts are affected with scrofulous inflammation: nodes, thickening of the ligaments, ulceration of Schneider's membrane, and subsequent caries of the nasal bones, are not unfrequently observed in cases where mercury has been employed in the treatment of that disease.

The above are, we believe, the most important circumstances which the late investigations into this question have developed; a question which must by the most strenuous votaries on either part be still considered as undecided. There is, however, another point in this dispute, which we must not pass over unnoticed:—whether or nor mercury possesses the power of protecting the general system against the accession of secondary symptoms? On this subject, we shall transcribe the remarks of Mr. Carmichael.

"In a question of this kind, reasoning can have no influence: we must draw our conclusions from facts, and as yet we have not a sufficient number to decide upon. In Portugal, Italy, and the southern part of Europe, Mr. Guthrie informs us, mercury is never employed for primary ulcers. My friend Dr. Armstrong, who has resided in Vienna for many years, and is well acquainted with the practice of the most eminent physicians and surgeons of that city, informs me that they never give mercury for primary ulcers, from a knowledge that they will heal without it, and from a belief that it will not prevent the accession of constitutional symptoms.

"Mr. Guthrie's own experience is, however, very much in favour of the opposite side of the question. He informs us that the proportion of those treated without mercury, who were afterwards affected by constitutional symptoms, was under one in ten. But, according to the returns from regimental hospitals, of those treated with mercury during the half year ending the 24th of June, 1817, not more than one in seventy-five had secondary symptoms; a statement which is greatly in favour of the exhibition of mercury, with a view to prevention. If, however, Mr. Guthrie had employed mercury in every case of true chancre only, and left all other primary ulcers to nature, it is reasonable to suppose that the proportion of cases, in which secondary symptoms occurred, would be very considerably lessened."\*

The results of the mode of treatment adopted at the hospital at Stockholm, by Mr. OSBECK,† do not furnish us with any useful facts respecting this subject; since, according to the report of Prof. SCHWEIGGER,‡ Mr. Osbeck selected his cases from those of long standing; and in many of them mercury had been employed unsuccessfully: they were, indeed, specimens of that disease which is very common in Norway and along the coasts of Sweden, termed *radefyge* by the Danes, and *salfstuss* by the Swedes; and which Prof. Schweigger considers to be the same with the *sibbens* of Scotland. This disease, he observes, is met with in several parts of Prussia, without being distinguished by any particular name, and is still common in Courland and Livonia: it is generally considered by the vulgar as a degenerated species of syphilis. This opinion of Prof. Schweigger accords with that expressed by Dr. Hamilton in an interesting Memoir published by him on this subject.§

Dr. Hamilton, however, carries this opinion still further; considering that the disease which first appeared in Europe at the latter part of the fifteenth century, was also of this nature, and not the *lues* of Hunter; and that, therefore, the writings of the greater number of the surgeons of that and the immediately subsequent period are not applicable to true syphilis.

Prof. Schweigger visited the hospital at Stockholm, which was intended for sixty patients, but only twelve were in it at that time, (probably from its being the season of the harvest.)

\* *Op. citat.* p. 25.

† *London Medical and Physical Journal*, vol. xl. p. 349.

‡ *Journal der Praktischen Heilkunde*.

§ *Edinburgh Medical and Surgical Journal*, vol. iv.; and *London Medical and Physical Journal*, vol. xl. p. 546.

One of them was a boy twelve years of age, and who had been three years affected with the disease for the cure of which he was admitted, which was evidently radefyge.

We have already mentioned the opinion of Mr. Carmichael, —that syphilis is now comparatively seldom to be witnessed in this country ; although he thinks there is reason to believe that it was the most predominant form of the venereal disease in the time of Hunter. He also remarks, that “a few years back, and particularly in 1812 and 1813, that malignant attendant of the phagedenic disease, the sloughing ulcer, was extremely prevalent in Dublin ; but I have not seen it in a single case, either in private or public practice, during the last two years. It may, therefore, be considered as far from improbable that there are prevailing forms of venereal affections, like prevailing epidemics, at different times and in different countries ; a circumstance that may possibly depend on the importation of fresh infections, although these arrivals are seldom recorded with the same notoriety as that of syphilis from St. Domingo.”\*

This opinion of Mr. Carmichael corresponds with that of Dr. WEIZMANN, a physician of eminent talents, residing at Bucharest.† Dr. W. also considers that infectious diseases of this kind occasionally appear, of sporadic origin, from the influence of strange climates, and connexion with persons of a different nation. Extensive series of observations, made in Moldavia, Wallachia, and Bulgaria, have led him to believe that ulcers on the genitals arising from common causes, frequently appear ; which would heal readily by simple means, if attention were paid to them ; but which, if venereal intercourse be indulged in, degenerate into chancres, are followed by pains of the bones, nodes, and indeed all the ordinary symptoms of true syphilis ; and in many instances cannot, apparently, be cured without mercury, although the patients have only had connexion with women, not only (as far as could be discovered) free from disease, but in whom it could not be supposed possible that a disease of that nature could exist. These cases were witnessed in countries where women are carefully confined in harems, and affected men who only had venereal intercourse with women thus secluded.

Dr. Weizmann mentions having been consulted by several persons of distinction at different times, who, on the night of

\* *Op. citat.* p. 220.

† *Russische Sammlung fur Naturwissenschaft und Heilkunde*, tome i. p. 126.

their nuptials had contracted blenorragia, chancres, and buboes, from their wives ; of whose virginity there could not exist a doubt, but who, perhaps, were affected with leucorrhœa. He relates the case of a Pacha who was affected with the ordinary symptoms of syphilis, as well as his twenty-four wives, although he had not had venereal intercourse with any excepting them, but several of whom had for some time previously had leucorrhœa ; and the pacha himself was afflicted every summer with an eruption, which first appeared on the genitals, and afterwards over the whole of the body. This Dr. W. attributes to his not having abstained from coition during that season of the year.

This author also endeavours to show that infectious diseases of this kind have been prevalent in those countries for two thousand years ; and he observes, that many of the physicians believe that syphilis has existed there for so long a period ; and that, in the second century of the common æra, when Trajan sent a number of colonies into Dacia, many of the persons constituting them became affected with an ulcerative disease on the genitals, which spread over the country with great rapidity ; and, when permitted to proceed without interruption, frequently terminated in death.

Since the labours of FABER, DUVERNEY, PETIT, DESAULT, BOYER, POTT, KIRKLAND, WHITE, CALLISEN, and RICHERAND, but little is left to be desired respecting the history of dislocation of the bones of the extremities : some varieties of these accidents have, however, been recorded by systematic writers, rather as possible than as what has actually occurred ; amongst which is the complete dislocation of the tibia anteriorly from the femur. Several authors have considered it as not of possible occurrence ; others have supposed that, were it to happen, amputation would be decidedly indicated. The following account of an instance of the species of injury above alluded to, and the favourable mode in which it terminated, must be considered particularly interesting. It is related by M. J. LAVALETTE.\* The accident arose from the falling of a mound of earth on the subject of it, while at work in preparing fortifications. It was accompanied with a turning inwards of the foot ; the limb was nearly extended, and somewhat shortened ; and there was a considerable depression above the condyles of the femur : the patella was turned upward and horizontally, so that its inferior margin was placed anteriorly, and it lay on the

\* *Journal complémentaire du Dictionnaire des Sciences Médicales*, tome 1.

surface of the head of the tibia; and there was fracture of the fibula near its upper extremity. Flexion and extension of the limb could be effected, without being productive of very great pain. It was reduced without much difficulty, and at the end of six weeks the patient had regained the perfect power of motion of the joint; but some degree of weakness of the flexor muscles of the foot remained; and, in walking, the limb was moved in a rotatory manner, describing nearly a circle, which appeared to be owing to rupture of the transverse ligaments of the joints. The power of flexion and extension of the leg on the thigh, observed in this case, will perhaps afford the pathognomonic sign between this accident and incomplete dislocation.

Separation of the epiphyses of the long bones is generally considered as of rare occurrence, and possible only in very early age. BOYER considered that cases stated to be of this kind were always instances of fracture of the neck of the bone. M. LAURENT has made public an account of two accidents of this sort, that occurred to the observation of Dr. CHAMPION of Bar-le-Duc.\* One happened in a boy eleven years of age, who, falling from a chariot, had his arm caught in the wheel, and was drawn by it for some distance. The skin was separated from the greater part of the arm; but the muscles and other soft parts were not apparently injured. Fracture of the bone was not suspected. It was on the third day from the accident when Dr. Champion saw the patient: a considerable degree of inflammation had then taken place; on the seventh day he died. The epiphysis of the scapular extremity of the humerus was found to be separated from the body of that bone, but remained in its natural situation with respect to the joint. Some degree of laceration of the capsular ligament and synovial membrane had taken place.

The other case occurred in a boy thirteen years of age: it arose from his fore-arm having been caught in the card of a cotton machine, by which it was twisted so as to have performed almost entire rotation with respect to the arm, just above the elbow-joint. The soft parts were so much injured that amputation was considered necessary. The cubito-radial epiphysis was found to be entirely separated from the os humeri, having a small flake of that bone attached to it. The epiphysis preserved its natural situation with respect to the fore-arm, being thus retained by means of the lateral ligaments: the anterior and posterior ligaments and the synovial membrane were torn off at the place of the disjunction of the epiphysis.

\* *Journal complémentaire du Dict. des Sciences Médicales*, tome 1.

It has generally been considered that when hydrocele of the tunica vaginalis testis became cured after the evacuation of the fluid by simple puncture, that it arose from the cavity becoming obliterated ; and Mr. ELSA on observing that simple puncture succeeded more frequently formerly than at present, remarked that this arose from the larger size of the puncture then made producing sufficient inflammation to cause adhesion of the tunics. Mr. KINDER WOOD, from whom we take these observations, remarks,\* that Mr. Pott pointed out the true cause of this result,—when he observes that, if the incision healed immediately, the disease would return ; but, if it became inflamed and sloughy, adhesion of the tunica vaginalis to the albuginea took place. Some cases lately witnessed by Mr. Wood have enabled him to ascertain that adhesion between those tunics does not happen in all cases cured in the above manner ; but that, on a certain degree of inflammation being excited in the sac, the exhalant vessels are roused to more vigorous and healthy action,—thus overcoming that relaxed and atonic state of them which is the true cause of the accumulation. The fact of the absorption of blood taking place from the sac of an hydrocele, which is evident in the twenty-fifth case related by Sir James Earle, and yet the accumulation of fluid at the same time going on, shows that the disease cannot be explained by the debility of the absorbents.

To stimulate the parts, or induce a slight degree of inflammation, Mr. Wood continues to observe, would appear to be the most obvious means of cure ; and this may be effected by preventing the puncture from healing by the first intention ; in which case, as in openings into the cavities of the pleura, peritoneum, joints, &c. the inflammation is found to extend from the wound over the membrane lining the cavity. Some cases were successfully treated by Mr. Wood from those indications, by making the incision with a lancet, and afterwards drawing out and excising a portion of the tunica vaginalis.

Since the publication of Mr. BRODIE's new mode of dividing varicose veins, several cases have been treated in this manner by Mr. CARMICHAEL, of Dublin,† with complete success. He gives a detail of six, and mentions that he has employed this practice in several other instances, which he does not relate, because he did not take notes respecting them. In five of the cases, the veins were divided just below the knee : in one, the

\* *Medico-Chirurgical Transactions*, vol. ix. part 1.

† *Transactions of the Association of the Fellows and Licentiates of the College of Physicians in Dublin*, vol. ii.

trunk of the saphena was operated on with Mr. Brodie's knife, and according to his plan. In this instance, considerable symptomatic fever, with great restlessness and total want of sleep, hard and quick pulse, and brown furred tongue, appeared on the sixth day from the operation. These symptoms were relieved by bloodletting, and the application of bread-and-water poultices.

These cases are a useful addition to those related by Mr. Brodie, and confirm the superior advantages attending his mode of operating; they also powerfully support his opinion, that equal danger does not attend a wound of the branches as an injury of the trunk of the vein.

We have already noticed the work of Mr. BRODIE on Diseases of the Joints, and the same reasons we before gave for not entering into the consideration of it in a pathological point of view will apply to it on the present occasion. We feel, however, disposed to remark, that it strongly evinces the advantages that are to be derived from the study of pathological anatomy. Although no new particular remedies nor general modes of treatment are proposed, yet it must be considered of the highest value in the practice of surgery. This arises from the precise views it gives of the diseases of which it treats; of their origin and progress; and of the particular measures that are applicable to particular forms of disease.

The beneficial powers of the most efficacious remedy with which we are acquainted, for some diseases of the joints, were known to the earliest writer on Surgery, and it has been employed nearly down to the present time with as little precision, in general, as that which directed him in the use of it: it has, necessarily, been productive of much benefit; but, like all other powerful measures not judiciously employed, it has caused almost equal mischief. The German surgeons have studied the diseases of the joints with considerable assiduity, and we cannot readily forget the lecture of Prof. SCHREGER on opening his Clinical School at Erlangen: but, in the latest and best of their works on this subject,\* we do not find that precision we are taught by Mr. Brodie for the application of the various remedies appropriate to the different forms and stages of the diseases of those organs, from the want of that pathological knowledge which he has acquired.

\* *Arthrokakologie, oder über die Verrenkungen durch innere Bedingung, und über die Heilkraft Wirkungs-und Anwendung sart des Gluheisens bey diesen Krankheitsformen.* Von Johann Nepomuk Rust.

A mode of treating spasmodic constriction of the anus, that has been attended with remarkable success, has lately been adopted by M. BOYER.\* Some of the cases in which he employed it were accompanied with a peculiar fissure or groove, the surface of which was excoriated, running longitudinally up the intestine. This fissure, M. Boyer observes, appears not to have been previously observed with attention, since it is not accurately described by any former writer. ALBUCASIS, SABATIER, and LEMONNIER, make mention of fissures and rhagades of the anus; but, from the means recommended for their relief by those authors, which consisted principally of unguents, being stated by them to have cured the disease, M. Boyer considers that it could not have been similar to that of which he treats; since the patients who came under his care with this malady had employed every variety of application that could be suggested to be capable of procuring relief, without thence receiving any benefit. Adults appear to be exclusively subject to this disease; the greater number of patients affected with it were from twenty-five to forty years of age. No class of society is exempt from it, and women seem to be somewhat more frequently affected than men. The characteristic sign of the disease is a fixed pain in some point surrounding the anus, which is always increased during the evacuation of the fæces; which is effected with extreme difficulty. The sphincter of the anus is so contracted, that the introduction of a finger or a bongie is very difficult, and productive of excessive pain. The causes of this affection are very obscure: in many cases it has been preceded by haemorrhoidal tumefaction, and in some instances excision of such tumors had been previously performed. Nothing remarkable can be seen externally: in some cases, haemorrhoidal tumors, or small protrusions, have been witnessed, but they were not considered by M. Boyer to be connected with the fissure. In some instances, the extremity of the fissure may be perceived at the orifice of the anus; but most frequently it can only be discovered by separating the sides of the rectum for some distance upwards by the fingers.

When the finger is introduced, a powerful constriction on it is felt; and the patient experiences extreme pain on pressure on some particular part, which is that of the situation of the fissure. M. Boyer has some doubts respecting which of those two affections should be considered as the original disease, and is inclined to believe that the fissure is a consequence of the spasmodic constriction; since the former never exists without the latter, whilst this frequently occurs without the fissure.

\* *Journal complementaire du Dictionnaire des Sciences Medicales*, tome ii.

No medicinal applications were found to be productive of benefit ; but the disease was, in every instance, removed by the division of the contracted part of the intestine with a bistoury. This division was always effected at one or other of the sides of the anus, where the fissure is usually situated, and not anteriorly or posteriorly : should the fissure, however, occur in either of the latter situations, it must not alter the mode of performing the operation. On the third day previous to the operation, a gentle purgative is to be administered, and on the same day a glyster ; in order that the patient may remain for three or four days without any faecal evacuation. He is to lie on his side, in the same manner as for the operation for fistula : the fore-finger is then to be oiled, and introduced into the rectum ; a narrow bistoury, rounded at the extremity, is to be passed along the finger, with one of its broad surfaces lying flat on it ; the cutting edge is then to be turned towards the surface of the intestine, in the course of the fissure, if it be situated laterally ; and the coats of the intestine, sphincter muscles, and the surrounding cellular tissue, divided at one stroke. A triangular wound is thus made, the summit of which corresponds with the intestine, and the base with the skin : it may perhaps, be necessary to extend this part of it, which may be done with another stroke of the instrument. In some cases, the intestine slides before the edge of the bistoury, and the wound of the cellular structure is then longer than that of the intestine : it will be necessary here to introduce the bistoury again, to lengthen the wound of the intestine ; or to effect this with blunt-pointed scissars.

When the constriction is very great, two incisions, one on each side, should be made. A large bougie is to be introduced into the parts, to prevent irregular adhesion of the wound ; the external dressing is of the usual kind for similar operations. The wound is generally cicatrized in about a month or six weeks ; in a few instances it has not been effected until between the second and third month. All the patients thus operated on, fifty in number, were perfectly and permanently cured.

The sixth volume of the Treatise on Surgical Diseases of M. le Baron BOYER has been lately published, which nearly completes a work that will ever be referred to as the standard of the state of surgery at the present period. We do not find in it any striking novelties in theory or modes of practice ; nor of those attempts, so frequently witnessed, to spring without the limits of our knowledge, without the ability to extend its boundaries ; but information which is of real utility, and calculated to improve the practice of surgery. It contains descriptions of diseases, which will render them intelligible to the practitioner when he is called to witness them at the bed-side of the

patient; and directions for his conduct, that will not be found mere illusions when they become the subject of experiment. The nature of our plan will not permit us to enter into the particular consideration of this work on the present occasion; but we shall, at a future period, furnish our readers with an analysis of the most valuable part of its contents.

The art of forming "supplemental noses," that has lately been revived in Europe, must be regarded as an object of considerable interest in the practice of surgery. The absence of the intellectual character of the human countenance which accompanies the want of that feature; and, what is of greater consequence, the uncleanliness attending it, and the disagreeable ideas respecting its origin that are associated with its appearance, render the removal of that deformity a circumstance of much importance to persons obliged to communicate with civil society. Mr. CARPUE, who brought this practice again into the repute it has acquired in England, has adopted the *Indian method*; but that employed by TAGLIACOZZI, with some modifications, is preferred by Professor GRAEFE, of Berlin, after trials of both of them in several instances.\* Prof. Graefe first had recourse to this practice in the year 1811, when he employed the Indian mode; again in 1816, according to the Italian; in 1817, after the Indian; and again in the same year, in the manner we have mentioned as that preferred by him, and which he is disposed to term the *German method*. The last instance determined his choice; and, making some allowance for warmth of expression in describing a favourite measure, it would thence appear that the latter method is entitled to preference. The patient was a female, twenty-four years of age, who had the cartilaginous portion of the nose destroyed by herpes. "The operation," he observes, "succeeded so completely in every respect, that no person could observe the least deformity: the new parts perfectly assimilating to the general agreeable appearance of the young lady's countenance." Such a description would be by no means appropriate to the results of the operation in the instances in which it has been performed in England. Other advantages, the author observes, attend this method; since the cicatrix on the forehead, and danger of ill consequences from exposure of the frontal bone, are thus avoided.

\* *De Rhinoplastice sive Arte cursum Nasum ad Vivum restituendi, commentatio, qua prisca illius ratio iterum experimentis illustratur, novisque methodis ad majorem perfectionem perducitur.* Conscripsit Carolus Ferdinandus Graefe; Latine edidit J. F. C. Hecker. Berolini, apud Reimerum, et Londini, apud Treuttel et Wurtz. pp. 161. 1818.

## REVIEW.

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*The physiognomical system of Drs. GALL and SPURZHEIM; founded on an anatomical and physiological examination of the nervous system in general, and of the brain in particular; and indicating the dispositions and manifestations of the mind. By J. G. SPURZHEIM, M. D. Being at the same time a book of reference for Dr. Spurzheim's demonstrative Lectures. Illustrated with nineteen copper plates. London: printed for Baldwin, Cradock, and Joy, 47, Paternoster Row; and William Blackwood, Edinburgh. 1815.*

THE name of Dr. Gall has now for several years been known to the publick. The first great work by him and Spurzheim in the French language was published in 1810; and this "physiognomical system" in English, which embraces the most material part of the former work, has been in our hands for three years past. Yet the doctrines advanced by these gentlemen are not very generally understood among us; and it is hoped that some account of them now will be acceptable, even though we have not any sufficient apology for having neglected them so long. The truth is on this subject, that we have delayed attempting to settle our opinions in respect to this system of craniology, in the hope that some further materials would be furnished from the men of learned leisure on the other side of the water. This hope has not as yet been fulfilled. For although some of the observations advanced by the German Doctors have been controverted, yet they are such as do not materially affect the first opinions advanced by Dr. Gall.

In his boyish days Dr. Gall was vexed to find that many of his school-fellows could commit their tasks to memory much more easily than he could, and this without understanding them better. He even thought himself superior to his successful rivals in the higher faculties of the mind. He looked on them with sunken eyes perhaps. At any rate he noticed, or thought he did, that those, who were most remarkable for the memory

of words, had unusually prominent eyes. He then inferred that there was some difference in their organization, to which they owed their superiority. He has since satisfied himself that the part of the brain, in which is exercised the faculty of studying language, is placed directly over the orbital process of the frontal bone. Thus the roof of the orbit is depressed, when this organ is very large, and the eye is thrown forward.

After going through his academical education Gall studied physick and of course became acquainted with anatomy. He found the brain a sort of *terra incognita*. At least while certain functions were attributed to it as a whole, he perceived that nothing was ascertained in respect to the offices of its various parts. It was obvious that the brain was the organ most immediately connected with the mind. But wherefore such curious mechanism, and what the peculiar use of its different parts? On these points nothing appearing to oppose a bold conjecture, Gall conceived that the various faculties of the mind acted through the medium of distinct parts of the great mass within the cranium. He conceived then that the brain had a cerebral organ devoted to each faculty of the mind; that these several organs bore certain proportions to each other generally; but that these proportions were not just the same in every individual; that in some instances one organ predominated, in some two or more organs were large in proportion, and that occasionally all or most of the organs were either deficient, or unusually perfect. He conceived that the uncommon size of any organ must increase the relative dimensions of that part of the cranium, under which that organ was placed. In examining the brain however he could not find any means of determining the organs, to which his imagination had thus given an existence. He therefore resorted to living subjects. He studied the characters of men. Whenever he found an individual distinguished by any peculiarity of character, he sought means of examining his head; he observed its form and noted whatever appeared to him peculiar. If in any one particular he found a similarity of conformation in men of similar character, he inferred that the organ, by which the distinguishing faculty of such men was exercised, must be placed in that part of the head, which was thus peculiarly formed. He tells us that his investigations were constantly rewarded by discoveries, until at length he became satisfied that every natural peculiarity of character might be ascertained by an external examination of the cranium. To assist his inquiries, he examined the busts of eminent men; and even extended his investigations to brute animals. Among these he found, as he thinks, that in those,

who possess in a remarkable degree any of the faculties common to them and man, there may be found a corresponding enlargement of that part of the head, in which he had discovered the organs of such faculty to be seated in the human species.

Such generally are the pretensions of Dr. Gall. In the course of his labours he associated with him another physician, Dr. Spurzheim, who has now for several years devoted himself to the perfection of this new doctrine. They have together studied the anatomy of the brain and nervous system, with the hope to obtain some anatomical facts in support of their opinions; they have made a joint stock of their knowledge, and Dr. Gall has consented, as Spurzheim says, to call the new system "our system," admitting the latter to share in the honours and emoluments of his discoveries. After they had travelled together from Germany to France and had given public lectures in various places on the European continent, Spurzheim went alone to Great Britain. Here he published the work which is before us.

Dr. Spurzheim in this work maintains the doctrines proposed by Gall, but often differs from him on particular points. He does not aim so much to ascertain the positive character in any individual case, as Gall does; but professes only to determine the predominant faculties. Such faculties, though alike in two individuals, may be modified by a difference in other faculties, they may have been cultivated in different degrees, and they may have been applied to objects in many respects diverse from each other; hence the resemblance between two such individuals may not be obvious and perhaps may not be discovered at all, except upon a philosophical analysis of their respective characters. But we proceed to a more particular account of the book before us.

Dr. Spurzheim's work contains a preface and introduction, then an anatomical part, and last a physiological part. This last part constitutes nine tenths of the whole book.

In the anatomical part is considered the difference in structure between the cineritious, or cortical, and the medullary parts of the brain and nervous system. It is contended that this last, the medullary part, is uniformly fibrous in its texture. These fibres are represented as arising from the cineritious part, as from a matrix; and it is stated that an increase of medulla in any portion of the nervous system is always accompanied by an increase of the cineritious substance. Much importance is attached to the direction of the fibres of the medulla, and Drs. G. and S. profess to have ascertained this direction in every instance. Anatomists have always sought to find a central

point, in which all the nerves terminate. Few at the present day pretend that any spot, or organ can be fixed upon as this point. These gentlemen think they have ascertained that there is not any such central point. They do however fix upon the *medulla oblongata* as a common centre of communication. With this certainly the *medulla spinalis* and the great sympathetic nerve are connected. From this also they trace all the cerebral nerves, except the first pair. And from this they conceive to arise what they call the diverging fibres both of the *cerebrum* and *cerebellum*. These diverging fibres go by a route more or less circuitous to terminate in the external cineritious substance of the cerebrum and cerebellum, but are reinforced on their passage by fibres from various portions of the ash-coloured substance. Again from the exterior cineritious substance of the whole brain Drs. G. and S. profess to trace a new set of fibres, which they call converging, and which they conceive to unite with those of the opposite side in what have heretofore been called commissures.

This is a very brief sketch of the views entertained by these gentlemen respecting the anatomy of the brain. We shall not discuss the propriety of their calling some fibres diverging and others converging; but as to all, which is matter of observation, we have verified the justice of their descriptions in our own examinations of the brain. The opponents of Drs. G. and S. have denied that their observations were original. But let it be granted that those opponents can pick out of a library of ancient anatomists detached observations on the same points, yet this is certain, that Dr. Gall has taught much more respecting the brain, and very intelligibly too, than was taught by the anatomists of the greatest schools in Europe before his day. In making this assertion we refer to his observations respecting the fibrous structure of the brain, and the course of the fibres, and still more particularly to his having traced the nerves of the brain to the *medulla oblongata* and *pons varolii*.

Having said thus much, we must add, that it does not appear that the anatomical observations of these gentlemen furnish any support to their physiological doctrines.

The physiological part of this work contains seventeen chapters, and its discussions extend to those subjects usually embraced by metaphysics. The mind is supposed to be immaterial, but not to act without material organs. The difference among men is attributed to a difference in these organs. As the mind experiences sensations through the medium of the organs of sense, so it is believed by Drs. G. and S. to exercise its propensities, its affections, its faculties of knowing and reflecting

through bodily organs. As the power or faculty of seeing or hearing may differ in degree, or may be wanting, from the state of the eye or ear; so they say that men are more ardent in love, more ambitious, more devout, more capable of acquiring different kinds of knowledge, &c. in consequence not of any excellence in the immaterial mind, but in consequence of an excellence, and an excellence in magnitude too, in particular organs. These organs however are not represented as anatomically distinct in the brain; they are only pointed out as composing particular parts of the brain, and they are discovered in living subjects in the mode already described in this review. Meanwhile the power of cultivating particular faculties is admitted; and it must follow as an inference, though not expressly stated we think by our author, that education may occasion effects on conduct and on character quite different from those, which nature would have produced. Yet where one faculty is peculiarly strong, its organs having been remarkably developed originally, it may be supposed that the peculiarity would become manifest notwithstanding opposing circumstances.

So far the doctrine of Gall respecting human character, setting aside the distinct organs of the various mental faculties, is in accordance with the opinions of probably the great majority of observers on the same subject. The real matter of observation, which is to be confirmed or refuted by others, is whether there are differences in character among men corresponding to the differences in the form of their heads, and to the relative expansions of the various parts of the head. It would require many observations to decide this matter. It is what we do not attempt. We wish only that men of leisure, who have the habit of observation, may qualify themselves to apply Dr. Gall's system to the cases, which come under their notice. To do this they must study the system. It cannot be displayed in its details in a short compass. Models and plates must be studied for the purpose. Some general description of it will however be attempted here.

First of all, how many organs have we a right to look for in the brain according to this system? or, in other words, how many distinct faculties does the mind possess? The following extracts answer these questions and show the general arrangement of the faculties adopted by Dr. Spurzheim, who it will be perceived considers his views of the subject more philosophical than those of Dr. Gall.

#### "ON THE PARTICULAR ORGANS.

"I have mentioned that Gall, unacquainted with the special faculties of the mind, sought organs for the actions of man; that the ac-

tions do not always indicate the special faculty; and that there are very few actions which are the result of one special faculty. However, the proceeding of Gall is conducive to determine the special faculties, and their sphere of activity. I shall not treat of the organs in the order in which they have been discovered, but according to their situation in the brain, beginning from the most inferior.

" Before I examine the special organs, I shall consider whether the faculties which manifest themselves by the cerebral parts may be divided or not. Before Gall, all physiologists and philosophers sought only the organs of the understanding in the brain, and the moral sentiments elsewhere: Gall was the first who showed that the organs of the moral sentiments are also situated in the brain. Moreover, opinions in respect to the faculties of the mind have hitherto been extremely vague. Even at the present day, the most common division of the faculties of the human mind is into will and understanding; *will* is subdivided into different modifications, as into inclination, propensity, desire, and passion; *understanding* into perception, memory, judgment, and imagination. All the functions of animals were considered as the effect of *instinct*. I have already explained\* that all these expressions are general or common, and that these general and common faculties have no particular organs. I have also demonstrated that it is wrong to call the faculties of animals *instinct* in opposition to the understanding of man; and that many actions of animals are accompanied with understanding, while many actions of man are the result of mere instinct. It remains to be proved that the division of human faculties into will and understanding is very inexact. I shall afterwards elucidate that it is a great mistake to consider will as a generic expression of every propensity, inclination, and desire. Here I maintain that will, as a generic name, indicating every propensity, cannot be considered as a particular class of functions different from the intellectual faculties. For every faculty, whether moral sentiment or intellectual faculty, desires, or has some propensity, as soon as it is active. The faculty of space, that of colour, of tune, of comparison, &c. being active, desire. Even every faculty desires more or less, from the weakest propensity to the highest degree, called passion. Thus the division of the human faculties into understanding and will, in the ordinary sense, is incorrect. Gall therefore rejects all divisions of the faculties manifested by the brain. He admits in every organ all modes of action. However it seems to me that different divisions of the cerebral faculties may be admitted. It is true all faculties desire, but all faculties of man do not present the modifications of action, of which the intellectual faculties are capable. The moral sentiments have no memory, no judgment, they produce only feelings, while the intellectual faculties have not only propensity, but also peculiar modifications of action of which the other faculties are destitute. Moreover, it seems to me that there is some difference between the dif-

\* Pages 272, et seq.

ferent moral sentiments. Several of them produce a mere propensity, while others produce some sentiment which is not only propensity, but a particular mode of feeling which must be felt in order to be known; for instance, self-love, justice, compassion, &c. All faculties which I call propensities are common to man and animals; but the faculties which produce propensity, together with a peculiar feeling, and which I call sentiments, may be subdivided into those which are common to man and animals, and those which are proper to man. Certain other faculties are destined to know the external world, and the qualities of external bodies: I name them knowing faculties. Still other faculties compare the relations between different external bodies, the relations between external bodies and the internal faculties, and those between the internal faculties themselves: I term these reflecting faculties.

Thus I divide and sub-divide the class of the mental faculties, according to the common principle of natural philosophy, into orders, genera, species, and varieties. The expression *Mind* designates the class of faculties. I divide it into two orders: into feelings (*gemüeth*, in German) and intellect. The feelings are subdivided into two genera: into propensities and sentiments. The propensities begin with that of eating and drinking. Many instincts of animals belong to this genus, while other instincts of animals, as those of singing and migrating, belong to the knowing faculties. The second genus of feelings consists in sentiments, some of which are common to man and animals, and others proper to man. The second order of mental faculties and intellect is subdivided also into two genera, into knowing and into reflecting faculties. Moreover, there are different species of propensities, of sentiments, of knowing, and of reflecting faculties. There are varieties in the different species; and we observe even monstrosities in the manifestations of the peculiar faculties." p. 290—293.

#### "ON THE INTERNAL ORGANS OF THE MIND.

"Before I examine the special faculties of the mind and their particular organs, I shall answer a question which may be put with respect to every organ, viz., *Why do you admit a particular organ for this, and not for another function?* In speaking of actions alone, it is difficult to conceive the necessity of such or such organ. The answer however is decisive if we can say, Experience demonstrates it. But, as I look for special faculties and their organs, the necessity of every organ may be demonstrated even by reasoning, that is, by the proofs which demonstrate the plurality of the organs. Consider these proofs in respect to every organ, and it is impossible to be mistaken. Consequently, it is necessary to point out a particular organ for every faculty,

1. Which exists in one kind of animals and not in another:
2. Which varies in both sexes of the same species:
3. Which is not proportionate to the other faculties of the same individual:

4. Which does not manifest itself simultaneously with the other faculties, that is, which appears or disappears earlier or later than the other faculties :

5. Which may act or rest alone :

6. Which alone is propagated in a distinct manner from parents to children : and

7. Which alone may preserve its proper state of health or disease." p. 342.

The description of the special faculties and their organs is then given, and this occupies one hundred and twenty pages in Spurzheim's work. A general view of the subject is contained in the following

#### " RECAPITULATION.

" In this chapter I have mentioned the particular organs which are discovered, and those which are still to be verified or pointed out. I have shown the importance of determining every special faculty and its sphere of activity, a point which Gall hitherto has too much neglected. I think that I have specified various faculties, and proved the necessity of admitting others. I have divided these special faculties into two orders—and each order into two genera. The first genus of feelings contains the propensities—amaliveness, philoprogenitiveness, inhabitiveness, adhesiveness, combativeness, destructiveness, constructiveness, covetiveness, and secretiveness. To the second genus belong self-love, approbation, cautiousness, benevolence, veneration, hope, ideality, righteousness, and determinateness. The first genus of the intellectual consists in the faculties of individuality, form, size, weight, colour, space, order, time, number, tune, and language. In the second genus of intellectual faculties I spoke of comparison, causality, and wit. The last faculty I treated of,—imitation,—belongs to none of the four genera, and acts upon them all. I have considered in every special faculty the necessity of its existence, its use and abuse, and the result of its inactivity. Finally, I have indicated the situation of every organ. A double objection against this kind of considerations is made. Some adversaries object that there are too many organs; others say, that there are not enough. Those who find the organs too multiplied must know that every organ is admitted by the same proofs, namely, by those which establish the plurality of the organs, and that it is verified by experience. The independence of one organ is neither more nor less certain than that of any other organ, and if any proofs be admitted in respect to one organ, they must be agreed to in respect to all other organs. Those who think that we do not admit organs enough, must consider that every faculty may be applied to an infinite number of things; for instance, seeing is always seeing, but what an infinite number of objects may be seen? Hearing is always hearing, and so on as to every external sense. It is the same

with the internal faculties. Constructing is always constructing, but what an infinite number of objects may be constructed, &c.? Moreover, it is to be observed that a great number of actions (not a great number of faculties) result from the combination of different faculties; and therefore it is not surprising to observe so many effects produced by so small a number of them. Are not twenty-four letters of the alphabet sufficient to compose all imaginable words? The muscles of the face are not very numerous, yet the face of almost every individual presents different physiognomical traces. There are a few primitive sounds or colours; there are only ten signs of numbers; and what an infinite number of combinations do not each of these present? There are probably thirty-three special faculties. Now if we consider all possible combinations of thirty-three faculties and their modifications, it would be indeed surprising if we did not observe such a number of modified functions. Consequently, we do not multiply the organs any more than is necessary, but we follow determinate principles in establishing each of them.  
p. 462—464.

The situation of each distinct organ cannot be understood from verbal description. The general arrangement of them however may be described. The organs of the propensities are placed in the posterior and inferior parts of the head; those of the sentiments in the posterior and superior parts and extend in the middle of the head to some distance front of the vertex; those of the knowing faculties are on the front part of the head, extending a little to the sides, but inferior; and those of the reflecting faculties occupy the upper and lateral parts of the head. Our authors do not believe however that they have learnt at once all that is to be learnt on this subject; they have therefore left certain spots on the head without assigning to them any special faculties.

The length of this article may serve as an excuse for our not offering any criticisms on the physiological opinions detailed in the foregoing abstracts. In respect to the general question, whether any correspondence can be found between the form of the head and the character in the individuals of our race, we are not ready to give an opinion. The observations of Dr. Gall are certainly entitled to some consideration, since he professes to have derived them from the examination of many hundreds and even thousands of skulls. Should any one, who has become acquainted with the subject, have made any observations of sufficient importance to offer to the publick, it would give us pleasure to record them in the pages of our journal.

Dr. Spurzheim's work affords much to amuse and to instruct; and is well worthy perusal. His logic is not however that of

an Englishman, and not such as to carry full conviction to the mind. This may be prejudice ; if so, it is one, which a habit of frequently reading the works of Germans and still more of the French, who resemble them in this respect, has not been sufficient to overcome.

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*Pathological and Surgical Observations on Diseases of the Joints* ; by B. C. BRODIE, F. R. S. assistant Surgeon to St. George's Hospital, and Lecturer on the Theory and Practice of Surgery. 8vo. pp. 329. London, 1818.

[From the London Medical and Physical Journal.]

WHEN our readers have considered the nature of the office and duties of a critical reviewer, and the labours and anxious sensations with which the exertion of them is generally accompanied, they may form an adequate idea of the pleasure we experience on taking up the present work of Mr. Brodie : for we are not only relieved, on this occasion, from the more arduous part of our inquisitorial functions—that of passing sentence on the merits of an author ; but from those also which must be deduced from historical research, and are intended to aid the reflections and facilitate the enquiries of the student respecting the subject under consideration. The opinion universally expressed on the value of Mr. Brodie's Remarks on Diseases of the Joints, published some years since, exempts us from the necessity of the former ; and the originality of his observations renders the latter of but little real utility. The space we can devote to this work will, therefore, be occupied by a mere analysis of what appears to be the most interesting of the subjects of which it treats.

Mr. Brodie divides diseases of the joints into the following species :—*Inflammation of the synovial membrane* : *ulceration of the synovial membrane* : cases in which the synovial membrane has undergone a morbid change of structure : *ulceration of the cartilages of the joints* : and *scrofulous disease of the joints, having its origin in the cancellous structure of the bones*. After some general anatomical and pathological remarks on the different structures which enter into the formation of the joints, the author proceeds to treat of inflammation of the synovial membrane, when it occurs as a primary affection.

" Although no period of life," he observes, " is altogether exempt from this disease, it does not occur equally in persons of all ages. It very seldom attacks young children ; becomes

less rare as they approach the age of puberty ; and is very frequent in adult persons. This is the reverse of what happens with respect to some of the other diseases to which the joints are liable ; and a knowledge of these circumstances will be found of some importance to the surgeon, in assisting him to form a ready diagnosis."

This disease, the author continues to remark, may take place as a symptom of a constitutional affection, from the use or abuse of mercury, &c. In other cases it is entirely local, and is sometimes apparently induced from a sprain, but more commonly from cold ; and thence those joints but thinly covered by integuments, are most frequently thus affected. It occurs in different degrees of intensity, but generally in a slow or chronic form ; sometimes continuing for weeks or months ; and, with occasional recoveries and relapses, may harrass the patient during several successive years.

The symptoms are pain in the joint, principally referred to one spot : this usually continues to increase during the first week or ten days, when it is at its height. In the course of one or two days after the commencement of pain, the joint may be observed to be swollen, which arises, in the early stage of the disease, entirely from the collection of a fluid in its cavity ; and, in the more superficial joints, an undulation of the fluid may be felt. After the inflammation has existed for some time, the undulation is less distinct, in consequence of the synovial membrane having become thickened from effusion of coagulable lymph. As the swelling consists more of solid substance, the natural mobility of the joint is in a greater degree impaired. The form of the swelling is not that of the articulating ends of the bones : it arises chiefly from the distended state of the synovial membrane, and varies in different joints according as that membrane is more or less perfectly surrounded by ligaments and tendons.

After the inflammation has subsided, the fluid is absorbed, and in many instances the joint regains its natural figure and mobility ; but, in the majority of cases, stiffness and swelling remain : the swelling sometimes has the same form which it possessed while the inflammation existed ; at others, it has that of the articulating ends of the bones, or nearly that of the joint in a natural state. The former may, perhaps arise from the inner surface of the synovial membrane having become lined with coagulated lymph ; the latter from a general thickening of its structure.

The patient is liable to suffer relapses of the disease from the impression of cold, inordinate exercise, &c. ; and some-

times a slight degree of inflammation lingering in the parts will extend to the other structures of the joint, and not unfrequently finally induce ulceration of the cartilage covering the surfaces of the bones. The latter species of disease may be distinguished from another affection, to be noticed hereafter, by the history of the malady.

When the inflammation is of the more acute kind, the swelling takes place immediately after, or at the same instant with, the first attack of pain: the pain is also very severe, particularly on the motion of the parts; and it is accompanied with some degree of symptomatic fever. Mr. Brodie continues to observe, that the boundaries of acute and chronic inflammation do not admit of being defined; but that those terms may designate the extremes of variations of form, which should be attended to in practice, as requiring somewhat different modes of treatment.

The above is a slight sketch from the author's account of the pathology and symptoms of inflammation of the synovial membrane: we shall now treat, in the same manner, of the curative measures adapted for that disease. When it appears to have arisen from a protracted or ill-conducted course of mercury, sarsaparilla may be given with some advantage. Opium conjoined with diaphoretics, the colchicum autumnale, &c. are advisable when it appears to be connected with rheumatism; and in some instances, when several joints are affected at the same time, much benefit is derived from moderate doses of some mercurial preparation. Topical remedies are, however, in all cases, of most importance.

In the more acute forms of the disease, leeches should be applied in the neighbourhood of the part; and, if there be much symptomatic fever, blood may be drawn from the arm. Saline purgatives and diaphoretics; and cold evaporating lotions, when there is not great tension of the parts, should also be employed.

Perfect quietude of the limb is necessary; and, in the chronic form of the inflammation, after having removed the more urgent symptoms by the abstraction of blood by cupping glasses, and the use of cold lotions, vesicatories may be applied; which should be repeated in as rapid succession as the period required for the healing of the blister will permit: this mode is more effectual than maintaining an ulcerated surface by means of the savine cerate. The vesicatories have been found more beneficial when applied at a short distance from the joint; acting thus as counter-irritants, without producing immediate excitation of the inflamed parts. The same measures are most effi-

cacious for the removal of the diseased state of the membrane consequent on the inflammation. When it is in a great measure relieved, a moderate degree of exercise of the joint is rather beneficial than otherwise. It will be useful, in this stage of the disease, to produce irritation of the skin covering the joint by stimulating liniments, or the ointment of tartarized antimony. The application generally directed by Mr. Brodie is composed of sulphuric acid, with four, five, or more, times its quantity of olive oil. Hospital patients, in general, whose skin is thick and somewhat callous, will bear it in the proportions of one part of the former to three of the latter. The effect of this liniment is to excite some degree of inflammation of the skin: the cuticle becomes of a brown colour, and separates in thick, broad scales. Issues and setons are of no service, except when it appears that a secondary disease has begun to take place, in the form of ulceration of the cartilages. When swelling and stiffness remain after inflammation has subsided, free exercise of the limb and friction over the joint may be employed with advantage.

Mr. Brodie relates several cases where inflammation of the synovial membranes of different joints appeared as a concatenation in the transition of diseases of the membranes from one part of the body to another; and which, in some degree, illustrate the beautiful doctrines of BORDEU respecting those structures.

One gentleman had eight attacks of inflammation of the synovial membranes. —

"The first took place when he was under twenty years of age, the others at various intervals in the course of the ensuing seventeen years. In one of them, the first symptom was inflammation of the urethra, attended with a discharge of pus, which could not rationally be attributed to venereal infection. This was followed by purulent ophthalmia; and that, by inflammation of the synovial membranes. In three of the attacks, a purulent ophthalmia was the first symptom; which was followed by inflammation and discharge of matter from the urethra; and then the synovial membranes became affected. In the other four attacks, the affection of the synovial membranes took place without any preceding inflammation of the eye or urethra. The disease was not confined to the synovial membranes of the joints, but those of the bursæ mucosæ were inflamed also. In some of the attacks, the muscles of the abdomen were painful and tender, and subject to spasmodic contractions; and there was occasionally an impediment to breathing, which seemed to arise from a similar affection of the diaphragm. The acute form of the disease, in this case, lasted

from six weeks to three months; but nearly a year elapsed before the use of the limbs was perfectly restored. The last attack began in July, 1817; and in the beginning of May, 1818, while he was still lame, he was seized with a very violent inflammation of the sclerotic coat and iris of one eye, which was subdued by very copious blood-letting and the exhibition of mercury."

Mr. Brodie has witnessed two instances of death ensuing from *ulceration of the synovial membrane*, occurring as a primary affection.

"A young lady, nine years of age, being at play, on the 1st of January, 1808, fell and wrenched her hip. She experienced so little uneasiness, that she walked out on that day as usual. In the evening she went to a dance; but while there was seized with rigor, was carried home, and put to bed. Next morning she was much indisposed, and complained of pain in the thigh and knee: on the following day she had pain in the hip, and was very feverish. These symptoms continued; she became delirious; and she died just a week from the time of the accident.

"On inspecting the body on the following day, the viscera of the thorax and abdomen were found in a perfectly healthy state. The hip-joint on the side of the injury contained about half an ounce of dark coloured pus; and the synovial membrane, where it was reflected over the neck of the femur, was destroyed by ulceration for about the extent of a shilling.

"A middle-aged man, who had met with a contusion of one shoulder, was admitted into St. George's Hospital in the winter of 1812. He complained of pain and tenderness of the shoulder, and a very slight degree of swelling was observable; but his principal disease was a fever, resembling typhus in its character, of which he died in a few days after his admission.

"On inspecting the body, about half an ounce of thin pus was found in the shoulder-joint. The synovial membrane bore marks of general inflammation, and in one spot, where it was reflected over the neck of the os brachii, it was destroyed by ulceration for about the extent of a sixpence."

These cases, the author remarks, form by no means solitary examples: every surgeon will be able to call to mind numerous other instances, which show that an impression made upon a small part of the nervous system may derange, and ultimately destroy, the functions of the whole animal economy.

Numerous instances have occurred to his observation, where the synovial membrane had undergone a *peculiar morbid change of structure*. In these cases, he observes, the morbid

action evidently originates in the synovial membrane, which loses its natural organization, and becomes converted into a thick pulpy substance, of a light-brown, and sometimes of a reddish-brown, colour, intersected by white membranous lines. As the disease advances, it involves all the parts of which the joint is composed, producing ulceration of the cartilages, caries of the bones, wasting of the ligaments and abscesses in different places.

"This disease," Mr. Brodie remarks, "is peculiar to the synovial membranes; at least, I have never met with it in any other part of the body: but it belongs to the same order with tubercles of the lungs, schirrus of the breast, the medullary sarcoma or fungus haematoëdes of the testicle, and numerous other diseases, in which the natural structure of the affected organ is destroyed, and a new and different structure is added in its place. To these it also bears a near resemblance in its progress. Thus, tubercles of the lungs, in the first instance, occupy the vesicular and inter-lobular substance; but ultimately they inflame and ulcerate, abscesses form in them, and then the pleura, bronchiæ, and other contiguous parts, become affected."

"In every case in which I have had it in my power to watch its progress, the complaint has been slow, and sometimes has remained in an indolent state during a very long period; but ultimately it has always terminated in the destruction of the joint."

It is rarely met with except in the knee. Mr. Brodie has never seen it in the hip or shoulder. It is probable, he remarks, that the influence of external cold may operate as one of the causes by which it is produced; and this explains why it occurs frequently in the knee, and seldom in the deep-seated articulations.

It generally affects persons who are not much past the age of puberty; and, for the most part, can be traced to no evident cause, though it sometimes appears to take place in consequence of repeated attacks of inflammation. The following is Mr. Brodie's account of the symptoms and progress of this malady:—

"In the origin of this disease, there is a slight degree of stiffness and tumefaction, without pain, and producing only the most trifling inconvenience. These symptoms gradually increase. In the greater number of cases, the joint at last scarcely admits of the smallest motion; but in a few cases it always retains a certain degree of mobility. The form of the swelling bears some resemblance to that in cases of inflammation of the synovial membrane, but it is less regular. The swelling

is soft and elastic, and gives to the hand a sensation as if it contained fluid. If only one hand be employed in making the examination, the deception may be complete, and the most experienced surgeon may be led to suppose that there is fluid in the joint, when there is none: but if both hands are employed, one on each side, the absence of fluid is distinguished by the want of fluctuation.

"The patient experiences little or no pain, until abscesses begin to form and the cartilages ulcerate; and even then the pain is, in many instances, not so severe as where the ulceration of the cartilages occurs as a primary disease; and the abscesses heal more readily, and discharge a smaller quantity of pus, than in cases of this last description. At this period the patient becomes affected with hectic fever, loses his flesh, and gradually sinks, unless the limb be removed by an operation.

"The progress of this disease varies in different cases. In general, one or two years elapse before it reaches to its most advanced stage; but sometimes the period is much longer, and occasionally it becomes indolent, so that it remains many months without any sensible alteration.

"The diagnosis of this disease is seldom difficult. The gradual progress of the enlargement, and stiffness of the joint without pain, and the soft elastic swelling without fluctuation, in the majority of cases, enable us to distinguish it readily from all the other morbid affections to which the joints are liable."

This is equally incurable with the other instances of morbid change of structure to which the author has alluded. All the various measures he has tried, or seen other surgeons employ, have only led him to form the above conclusion. The progress of the disease may be somewhat checked by means of rest and cold lotions; and, when there is considerable pain in consequence of the cartilages having begun to ulcerate, some benefit has been derived from warm fomentations and poultices; but no method with which he is acquainted is capable of doing more than checking the progress, and somewhat relieving the symptoms, of the complaint. In every instance where he has had an opportunity to witness its termination, ulceration of the cartilages, the formation of abscesses in the cavity of the joint, and the consequent disturbance of the patient's health, have rendered amputation of the limb the only apparent mean of preserving his life. At this stage of the disease the surgeon must urge the operation; but, at an earlier period, it may be a matter of choice to the patient, whether or not he will live with the incumbrance of the useless limb until its removal is indispensable.

The chapter on *ulceration of the cartilages of the joints* will not admit of regular analysis. There are so many circumstances attending this disease, the knowledge of which is of such high importance, that the observations of Mr. Brodie, although related with the utmost conciseness, occupy a considerable proportion of the space of this volume. Our account of it must, therefore, be very general, and such as will rather excite such of our readers, as may not have already studied it, to the perusal of the work itself.

"In the cases which have been related," says Mr. Brodie, "the ulceration of the cartilages of the diseased joints was a secondary affection, the consequence of a morbid action originating in the neighbouring soft parts. There are other cases, and those not of rare occurrence, in which the ulceration of the articular cartilages exists as a primary disease."

"When the ulceration of the cartilage occurs in the superficial joints; it constitutes one of the diseases which have been known by the name of white-swelling. From those which I have met with, I am led to conclude that, when it takes place in the hip, it is this disease which has been variously designated by writers—the 'morbus coxarius,' the 'disease of the hip,' the 'scrofulous hip,' the 'scrofulous caries of the hip-joint.' At least, it is to this disease that these names have been principally applied; though, probably, other morbid affections have been occasionally confounded with it."

The following is a sketch of the different stages and general progress of this disease:—1. Ulceration takes place in the cartilages; generally that of the acetabulum first, and in that of the head of the femur afterwards: sometimes it begins in both at the same time.—2. The ulceration extends to the bones, which become carious; the head of the femur is diminished in size, and the acetabulum is rendered deeper and wider.—3. Abscess forms in the joint, which after some time makes its way, by ulceration, through the synovial membrane and capsular ligament, into the thigh, nates, or even through the bottom of the acetabulum into the pelvis.—4. In consequence of the abscess, the synovial membrane and capsular ligament become inflamed and thickened: the muscles are altered in structure; sinuses are formed in various parts; and at last all the soft parts are blended together into one confused mass, resembling the parietes of an ordinary abscess.

"In some cases," continues the author, "the ulceration of the cartilage begins on that surface which is connected with the bone; and, from having observed this circumstance, I was led at first to adopt an opinion, which I have heard stated to have

been that of Mr. Hunter, and which appeared to be warranted by the small degree of vascularity which cartilage possesses,—that ulceration of it takes place, not from the action of its own vessels, but in consequence of its being acted on by the vessels of the bone to which it is connected. I afterwards found that, in many instances, previously to ulceration, the cartilage undergoes a remarkable change of texture, becoming soft, and assuming a fibrous appearance: I was thence led to conclude that this opinion is not altogether correct, and I since witnessed two cases which appeared to show that cartilage, as well as other parts, is capable of ulcerating from the action of its own vessels."

Ulceration of the articular cartilages occurs at any period of life, but principally in children or adults under the middle age. It is generally confined to a single joint, most frequently that of the hip. Sometimes the patient traces its origin to a local injury; but, for the most part, no cause can be assigned for the disease, and often that to which it is attributed is more imaginary than real.

When the hip is affected, the only symptoms in the early stages are—trifling pain, and a slight degree of lameness in the lower limb. The pain a good deal resembles rheumatism, having no certain seat; being referred to different parts of the limb in different individuals, and even in the same person at different periods. As the pain increases in intensity, it is more confined in its situation. In the greater number of instances it is referred to the hip and the knee also, and the pain of the knee is generally the most severe of the two. The pain is much aggravated by motion of the joint, particularly by whatever occasions pressure of the ulcerated cartilaginous surfaces against each other. Soon after the commencement of pain, the parts about the hip-joint become tender. The absorbent glands in the groin sometimes become enlarged. The pain about the knee, although originating from sympathy, is frequently at length accompanied with swelling and inflammation.

When the disease has existed for some time, the nates undergo a remarkable alteration in their form: they become wasted and less prominent; so that, instead of their usual convexity, they have a flattened appearance, and seem wider than those of the other side; and, in some few cases, in the advanced stage of the disease, they are really wider, in consequence of the acetabulum being filled with coagulated lymph and matter, and the head of the femur being pushed out of its natural situation. Another symptom which occurs in this disease is an alteration in the length of the limb. 1. In the early stage of the complaint, the patient often imagines the limb of the af-

fected side to be longer than the other: but this is only apparent, and is produced by the position of the pelvis being altered in such a way that the crista of the one ilium is depressed below the level of that of the other; which arises from the posture in which the patient places himself when he stands erect. He supports the weight of his body on the sound limb, the hip and knee of which are, in consequence, maintained in a state of extension; at the same time that the opposite limb is inclined forward, and the foot placed on the ground considerably anterior to the other; not for the purpose of supporting the superincumbent weight, but to keep the person steady and preserve its equilibrium: this cannot be done without the pelvis being depressed on the same side.—2. In a few cases, where the patient is in the erect position, it may be observed that the foot of the affected limb is not inclined more forward than the other, but that the toes only are in contact with the ground, and the heel raised, at the same time that the knee is a little bent. This answers the same purpose, that of enabling the patient to throw the weight of his body on the other foot; but it produces an inclination of the pelvis in the opposite direction to that before described. The crista of the ilium is higher on the affected than on the sound side in these instances, and there is an apparent shortening of the diseased limb.—3. In the most advanced stage of the disease, when the head of the femur has been destroyed by ulceration, the muscles draw the bone upwards, and there is real shortening of the limb: the foot may here be rotated inwards, but, if left to itself, it is generally turned outwards.—4. In other cases the limb is shortened; the thigh is bent forwards; the toes are turned inwards, and do not admit of being turned outwards; and there is every symptom of dislocation of the hip upwards and outwards, which really takes place in consequence of the cavity of the acetabulum having become filled with coagulated lymph and matter, and the round ligament destroyed by ulceration.

The shortening of the limb, which takes place in the advanced stage of the disease, is usually, but not always, the precursor of abscess. The formation of matter is also indicated by an aggravation of pain, by greater wasting of the limb, and the thigh becoming more bent forward, and being incapable of extension without causing a great and almost intolerable increase of the sufferings of the patient.

After some observations on the varieties in the character of the disease when it occurs in other joints, Mr. Brodie enters on the consideration of the mode of treatment. The keeping the limb in a state of perfect quietude is one of the first and

most important circumstances to be attended to. It is in this malady that caustic issues, setons, and blisters kept open with savine cerate, have been productive of so much benefit.

When the cartilages of the hip-joint are affected, the patient should, in the first instance, be confined to a couch, if not to his bed; and, if the disease be far advanced, the limb should be supported by pillows, so as to favour the production of ankylosis, by allowing it to vary as little as possible from one position. In young children, blisters are capable of affording complete relief: they may be applied on the nates, round the great trochanter, and in the groin; and kept open by savine cerate. In children above the age of eight or ten years, and in adults, the same treatment is useful in the very early stage of the disease; but, in the more advanced periods, issues made with caustic are more efficacious. The hollow behind the great trochanter of the femur is, in many respects, the most convenient situation for the application of the caustic; but, in some cases, the application of it on the outside of the hip is attended with better effects; perhaps from the skin in this situation being nearer to the joint than that of the former. An ulcer may be made with pure potash, half an inch in breadth and two inches in length, in the adult, behind the great trochanter; and, if this fail to give relief, a second, of a smaller size, may be produced in the situation of the anterior edge of the tensor vaginæ femoris muscle. The good derived from the issue does not seem to be in proportion to the quantity of pus discharged from its surface. From the observation having been frequently made, that more abatement of the symptoms is produced during the first few days from the application of the caustic than in several weeks afterwards, Mr. Brodie was led to consider that keeping the issue open, by rubbing its surface with pure potash, or sulphate of copper, two or three time a-week, would be more beneficial than the use of beans for this purpose. An extensive trial of both methods has appeared to demonstrate the superior efficacy of the former to that of the latter method. The pain produced by the use of the caustic is very considerable; but the subsequent relief of the symptoms is such, that patients have frequently been found to make the application themselves.

These measures, in general, produce an immediate alleviation of the symptoms; and, (provided that suppuration has not taken place,) if the patient continues in a state of quietude, the pain in general entirely subsides after the lapse of a few weeks. When the pain is exceedingly severe, and there is reason to believe that the ulcerated surfaces are in a state of much inflam-

mation in consequence of the joint having been exercised, bleeding and the warm-bath may be had recourse to. A vesicatory may also be applied to the groin. The production of a blister on the knee or thigh will often produce considerable, and sometimes entire, relief of the pain which is referred to those parts from sympathy with the affection of the hip. The production of counter irritation in the groin has been found particularly beneficial; but there are many objections to the application of caustic, which do not apply to the introduction of a seton in this situation.

"I was led to adopt this mode of treatment some years ago," says Mr. Brodie, "partly from observing that the skin of the groin is nearer to the hip-joint than the skin elsewhere: partly from an expectation (though not a very confident one) that the making a seton over the trunk of the anterior crural nerve might be particularly calculated to relieve the pain referred to those parts to which the branches of that nerve are distributed. The results of this practice more than realized whatever hopes I had entertained of its success. In many cases the seton occasioned very speedily a complete relief of the pain: in other cases, indeed, it failed to produce the like good effects; but these cases have borne only a small proportion to those in which it has succeeded. On the whole, I am led to conclude that, where the pain is very severe, the seton in the groin is more calculated to afford immediate relief than the caustic issue; but that it is not equally efficacious in checking the progress of the disease as in lessening the violence of its symptoms: and that the caustic issue can be better depended on for the production of a cure."

After some observations on the modification of the above plan of treatment that may be advisable when the disease affects other joints, Mr. Brodie proceeds to the consideration of the treatment of the abscess which ensues from it in its latter stages. He first adduces some remarks on the various measures that have been proposed for the treatment of abscesses in general, and how far they are applicable to that which forms the subject of the present observations. Evacuating the matter by means of a valvular opening, as recommended by Mr. Abernethy for lumbar abscess,—emetics,—electricity,—and pressure, have not been found to produce the good effects on this as on other occasions. Early puncture of the abscess is certainly not advisable; the opening of it should, if possible, be avoided until the symptoms have been somewhat alleviated by the means above directed. When it is considered proper to evacuate the matter,

"—an opening should be made with an abscess lancet, and the limb wrapped in flannel wrung out of hot water, which may be continued as long as the matter continues to flow of itself. In general, when a certain quantity has escaped, the discharge ceases; the orifice heals, and the puncture may then be repeated some time afterwards; but, where the puncture has not become closed, I have seldom found any ill consequences to arise from it remaining open.

"When the ulceration of the cartilages has made very considerable progress," continues Mr. Brodie, "if the patient recovers so as to preserve the limb, he seldom has the use of the joint afterwards, the bones composing it being united by ankylosis; but, if it has been checked in a less advanced stage, even though there is reason to believe that the cartilages have been extensively destroyed, the patient may retain the natural motion of the joint. I have not hitherto examined any cases in which it appeared that there had been any attempt at the regeneration of the absorbed cartilages; and I have occasionally been able both to feel and to hear the hard surfaces of the bones grating against each other in such a manner that it was evident they had no cartilaginous coverings. In some instances a compact layer of bone is formed on the carious surface, nearly similar to what is seen on the healthy bone after the cartilage has been destroyed by maceration. I have many times, in dissection, observed a portion of the cartilage of a joint wanting, and in its place a thin layer of hard semi-transparent substance, of a grey colour, and presenting an irregular granulated surface. It is probable that, in these cases, the original disease had been ulceration of the cartilages. In a subject in the dissecting-room, I found no remains of cartilage on the bones of one hip, but in its place a crust of bony matter was formed, of a compact texture, of a white colour, smooth, and having an appearance not very unlike that of marble."

Mr. Brodie next treats of scrofulous disease of the joints; some other morbid affections of those organs, as tumors, portions of loose cartilage, and gouty concretions in their cavities; caries of the spine; and inflammation of the bursæ mucosæ: but the space which the analysis of the more important and original parts of this treatise has already occupied, prevents the extension of it to the subjects above enumerated. Indeed, we consider that it would be useless to adduce further extracts from a work that will constitute part of our classical medical literature.

# INTELLIGENCE.

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## Foreign.

*Observations on Abdominal Pressure in Obstetrical Practice;* by W. MARSON, Esq. Member of the Royal College of Surgeons.

I HAVE read with much attention your report of Dr. Clarke's Registry, No. 237, p. 401; and also the paper of Dr. Hamilton, No. 240, p. 121, on the importance of abdominal pressure in obstetrical practice; and wish the greater pleasure, because I have so amply treated on the subject myself, in your Journal, fifteen years since, (vol. x. p. 433, and vol. xi. p. 328.) Dr. Hamilton, your correspondent, by referring to these papers, will give me credit for having been more illustrative on abdominal pressure than himself,—to the junior practitioner in particular; and he may not think his own time unprofitably spent in the perusal of them. It is true I have not carried abdominal pressure to the extent “of pursuing the fundus uteri in its contraction until the foetus be expelled,” believing that I have given it all the latitude I ought to do; and I mean every respect to Dr. Clarke and Dr. Hamilton, though I declare myself not very sanguine in the use of the pressure they speak of, nor am I an advocate for abdominal pressure by towels or bandages, which Dr. Hamilton alludes to.

I shall waive further remark, as the only motive of this paper is to put in a full view the importance of abdominal pressure in obstetrical practice, and to establish my claim of first bringing into notice what has recently been, I will say, supported by Dr. Clarke and Dr. Hamilton.

*Lon. Med. & Phy. Jour.*

**On Sarsaparilla.\* By RICHARD BATTLEY, Chemist.**

Notwithstanding the long experience which the Profession, both Medical and Surgical, have had of the qualities of sarsaparilla, medical judgment is still divided respecting its efficacy in the cure of disease. It will, therefore, probably be considered fortunate if the ground of this difference of opinion can be satisfactorily explained.

In surgical practice, indeed, the credit of sarsaparilla has more uniformly been maintained, perhaps because Surgeons are more frequently called upon to seek the means which increase the restorative powers of the body, when reduced by the various accidents, and by the class of diseases on which they are more particularly consulted.

It is well known, however, that even the ablest Surgeons, notwithstanding their uniform opinion as to the efficacy of this medicine, have yet doubted whether the ordinary mode of preparing it was best calculated to preserve its essential properties; hence some have been led to prescribe sarsaparilla in the inconvenient and bulky form of powder, hoping, amongst the useless, at least to retain the efficacious parts.

In the course of my attention to the preservation and preparation of medicines in their active forms, I have been induced to pay some attention to this root; and I can assert, as the result of direct experiment, that its medical properties reside, exclusively, in the *cortical part*; and that such properties may effectually be disengaged by cold infusion in water; the root thus treated becoming a tasteless and inert substance. It follows that when the cortical part has been materially injured, or when, in the preparation of the medicine, the ligneous part of the root has been chiefly regarded, the remedy so prepared must be, in a great measure, if not wholly, inefficacious. Various modes of improving on the simple infusion will readily suggest themselves to practitioners; and I find that an elegant preparation is produced by infusing the *perfect root* in cold lime-water; a menstruum particularly calculated to improve its medical properties when administered to dyspeptic patients.

The component parts of sarsaparilla, as far as I have been able to ascertain them, I shall reserve for a future communication.

\* It is needless to say that we feel much obliged to Mr. Battley for the present communication; and that we shall always have a particular gratification in presenting to our readers the Papers which he may be good enough to forward to us. We are convinced that in the present day of scepticism and simplifying, too little attention is given to the analysis and constituent parts of the medicines which are used in practice.—EDIT.

P. S. The Editors of the MEDICAL REPOSITORY have occasionally noticed a preparation which I have introduced to the Profession; a component part of opium dissolved in water, under the name of liquor opii sedativus. I shall shortly have occasion to offer some further remarks on this subject. I am in possession of various documents both from Physicians and Surgeons of the highest rank, agreeing, in the main, that it is a medicine of very extraordinary power, as well when externally applied as when internally administered. These testimonies will induce me to claim for it the earnest attention of the Profession, as a medicine acting powerfully on the nervous system, and more directly sedative than any other preparation of opium, and consequently affording more complete relief in the very extensive class of diseases of irritation.—*Lon. Med. Repos.*

*Extra-uterine Pregnancy.*—Dr. Recamier sometime since reported to one of the medical societies of Paris\* several examples of aberrations of this nature; among which is the following:—He was consulted by a woman of about thirty-six years of age, suffering from slight dysentery, which readily yielded to sedative remedies. Six weeks afterwards this woman was suddenly seized with most violent colic, prostration of strength, and decomposition of the features. She was dying when Dr. Recamier arrived. Her abdomen, rather more voluminous than natural, was not very sensible to the touch. She expired in a few hours. On dissection, there was found in the abdominal cavity, among the intestinal convolutions, a foetus, which, having been developed in one of the Fallopian tubes, had escaped by a rupture, about two inches in length, the borders of which were still bloody.

*Ibid.*

*Spontaneous elongation of the anterior labium of the Uterus during Parturition.*—Among the obscure and embarrassing circumstances which so frequently present themselves in the practice of Midwifery, we have seldom been called upon to notice a fact more curious in itself, or more important as it regards the conduct of the Accoucheur, than that which constitutes the subject of a paper lately published by Professor Duclos, of Thoulouse†.

\* Bulletin de l'Athénée de Médecine de Paris. Bibliothèque Médicale, Tom. LVIII.

† Bulletin de la Faculté de Médecine de Paris, &c. 1818, No. IX.

A lady, aged thirty-four, during the apparently favourable progress of her fifth labour, uttered in the midst of a severe bearing pain a continued cry, and exclaimed that the child was born. The midwife, however, on examination, found a long substance hanging between the thighs, which she took for the placenta prematurely expelled from the uterus. Hæmorrhage and syncope prevailed for a while. The pains subsided; but considerable alarm and agitation ensued. Dr. Duclos arrived four hours after the accident. The uterine contractions had then ceased, and the hæmorrhage was slight. The paleness of her countenance, and the smallness and debility of the pulse, were such as to excite great apprehensions for her safety. On examination, a cylindrical tumor was found by Dr. Duclos, pendant from the vulva; about four inches long, and two inches thick in the middle; broader at its exit from the vagina than at its lower extremity; of a red vinous colour; slightly puckered; resistent and insensible. A small quantity of black blood oozed from it. The Professor insinuated his hand beneath the tumor to its base; but the head of the fœtus, partly engaged in the pelvic cavity, prevented its introduction anteriorly into the uterus. The flattened base of the tumor seemed to lose itself backward, and become confounded with the posterior labium of the uterus; the orifice of which was completely dilated. At first Dr. Duclos was inclined to regard it as a polypus rendered more voluminous by the contractions of the womb, and the pressure exercised on its base by the head of the fœtus. But this opinion was abandoned on receiving the positive assurances that it had existed only four hours, had suddenly formed during a violent pain, and been attended with hæmorrhage. Nothing particular had been previously remarked in the dilatation of the uterine orifice.

After much embarrassment and reflection as to the nature of this unusual phenomenon, Dr. Duclos concluded that the tumor must be formed by an elongation of the anterior labium of the uterus; and that this part, strongly compressed on one side by the pubic arch, and on the other by the head of the fœtus, had descended into the pelvis, and became gorged with blood during the expulsive efforts of the uterus. Under these circumstances immediate delivery by the forceps was determined on, and the rectum in consequence evacuated. His patient having been conveniently disposed, Dr. Duclos then ruptured the membranes, from which a little fluid only escaped. The child's head occupied a great portion of the pelvic cavity; the occiput had nearly arrived beneath the pubic arch. On raising it a little, the remnant of the liquor amnii escaped.

Meanwhile, the contractions of the uterus gradually returned, and hence the application of the forceps was suspended. Yet, although the process went on, the head of the child advanced with difficulty ; and the tumor obstructing the passage became more elongated, notwithstanding the pressure exercised upon it from summit to base by Dr. Duclos. The head, engaged in the vulva, being now arrested in the passage by the tumor before it, he applied his left hand on, and pressed strongly the occiput, in order to maintain the anterior flexion of the head ; while with the indicator and middle finger of the right introduced into the rectum, he endeavoured to reach the forehead. This point attained, he pressed it with force, in order to facilitate the expulsion of the head and provoke the dilatation of the perineum. By this manœuvre it was also hoped, that the injury which might otherwise have been inflicted by the passage of the head on the base of the tumor would be avoided. The expulsive pains seconding the manual operation, the head of the child at last, with difficulty, cleared the vulva, and thus the delivery was safely accomplished. After this the patient was put to bed, and had the tumor and genital parts fomented with an emollient decoction every four hours. Next day the tumor had lost nearly half its volume, and the lochia were abundant. Thirty-six hours after delivery, the tumor was no longer seen, except on the borders of the labia. The fomentations were continued, and the secretion of milk took place without fever.

On the tenth day the tumor had wholly disappeared, but the anterior labium of the uterine orifice preserved yet its nipple-like form. This, however, was no longer to be seen on the 20th, and the orifice of the womb presented no peculiar disposition. In fine, both the woman and child eventually did well.

In 1816, two years after the occurrence just described, the same lady was again confined, and exhibited a similar phenomenon. Delivery was, in this instance, advantageously accomplished by laying the patient on her back upon the bed, and compressing the uterine elongation against the arch of the pubis with the left hand, while the right was engaged in operating the anterior flexion of the head of the foetus. The elongation, on the ensuing day, could not be seen externally ; and on the fifteenth not the slightest vestige of it was discoverable.

The third and last case, in which Dr. Duclos has observed this curious circumstance, was that of a young woman in labour of her first child. In this instance, he regards the violent contractions of the uterus as its cause. The anterior labium of the organ was elongated to the extent of two inches, and slight haemorrhage took place. The manœuvre employed in the first case was here resorted to with success.

On the fifth day after delivery, the uterine elongation presented itself under the form of a small nipple only ; and the termination of the case was perfectly successful. No further comment on the importance of these cases is necessary. Dr. Duclos, in conclusion, observes, that whenever the resistance of the parts forming the vulvo-vaginal orifice has been such as to obstruct the passage of the foetus, he has commonly effected its delivery without the aid of the forceps, by introducing his fingers into the rectum, and exercising a strong pressure on the child's forehead, so as to force the occiput to slide in front of the pubis.

*Ibid.*

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**A Case of Hæmorrhage, which terminated fatally from the Application of a Leech.** Communicated by ANTHONY WHITE, M. B., Surgeon to the Asylum, Consulting Surgeon to the General Penitentiary, and Assisting Surgeon to the Westminster Hospital.

IT has been rarely (if ever) recorded, that the application of a leech has been directly productive of death to the person on whom it was placed : such an occurrence I have once witnessed ; and on several occasions my assistance has been requested to restrain hæmorrhage which had continued many hours, and where every usual method had in vain been adopted, and where the blanched and exhausted condition of the patient was not sufficient to cause a spontaneous cessation of the flow of blood. The case of death to which I allude happened in my immediate neighbourhood : the circumstances were the following. A gland under the angle of the jaw became enlarged and painful, in a female child two years and a half old : the mother, at the request of her apothecary, placed a leech on the tumor ; the direction given was, that when the leech had fallen off, a large poultice was to be applied to the bite, into which it might bleed ; and it was requested that the poultice should be kept on all night. The leech was applied at night ; the poultice also ; the child put to bed : thither also, at the same time, went the mother.

The next morning the child was found with pallid face and bloodless lips, and its whole body bedewed with chilly sweat, the usual precursor of death, arising from slow hæmorrhagic exhaustion. The blood had flowed during seven hours, and was found in a large coagulated mass under the sheet. The unhappy mother had of course slept during this period : the volatile and other stimulants which I directed to be administered were of no avail ; depletion had gone beyond the recoverable limit, and the patient died before I left the house.

It is remarkable that in this exhausted state blood was yet slowly oozing from the leech wound ; and I have witnessed in many other instances, where, even during fainting, the blood has flowed from the peculiar bite of this animal. Children, on account of many inflammatory affections, and where the use of the lancet is impracticable, become the frequent subjects of leeching ; and many parts of the body, from structure and situation, are ill calculated to bear pressure, or to have it effectually applied. The relation of the following case, which led me to adopt a method of restraining haemorrhage, is an example :— My friend, Mr. William Pritchett, had directed leeches to be applied over the trachea of a child affected with croup ; the bleeding from one of the punctures became alarming : styptics after the usual fashion had been in regular order applied, and all as regularly failed. On my seeing the child with Mr. Pritchett, I found it much exhausted, and the blood pouring over the throat in a rapid stream. The weak condition of the patient forbade me to reiterate the attempts which are usually adopted, and on closely inspecting the parts, a small pulsating arterial stream was discernible. On the spur of the moment the following method was adopted : I procured a fine sewing needle, which I passed through the leech-bite, piercing as much of the skin on each side as was sufficient to obtain a moderately firm hold : the bite or wound thus transfixed, I conveyed beneath the needle a few turns of common thread, which gave me complete and effectual pressure on the orifice. The method used by the farriers after bleeding the horse, which is to pass a pin through the orifice, and afterwards to wrap round or behind the pin a piece of hair or flax, nearly resembles the plan I adopted. A piece of cork or wax was adjusted on each end of the needle, which the next day was removed : the portion of skin necessarily pierced on each side of the wound is so small that very little pain is experienced by the operation. The plan is so simple, yet so certainly effectual, that I have for the last five or six years constantly adopted it, where, from situation or structure, pressure was inadmissible ; or danger, during the night, of a recurrence of the bleeding was apprehended. A very recent case in which leeches had been applied over the scrotum of a boy eight years old, with a congenital hernia, and where (arising from three of the punctures,) haemorrhage had returned during the night, the patient was with difficulty recovered from its excess, the needles were effectually applied. I have from this circumstance thought the subject of sufficient importance to the community to give publicity to the method which has invariably succeeded. The throat, scrotum, and perineum,

um, are parts of the body to which leeches are frequently applied, and which, from situation and structure, are ill adapted to receive or bear pressure: when the bleeding cannot be restrained with facility in these situations, I have oftentimes saved my patient much exhaustion and alarm, and myself much trouble, by adopting the plan I have explained. Where the leech, with its teeth, has punctured a large cutaneous artery, which not unfrequently happens, and where, from its imperfect division, contraction cannot take place, I have occasionally succeeded in restraining the bleeding by pushing the point of a lancet into the leech puncture; but this method is uncertain of success. From the report of many of my professional friends it is certain that infants occasionally perish from the effect of leech punctures; and many cases of great hazard, no doubt, frequently occur from the same cause to children beyond the infant age, and even to adults of delicate and lax structure. The circumstances connected with each case will regulate the adoption (among Practitioners) of the method which I have recommended. The histories I have detailed are of themselves, I trust, of sufficient importance to warrant this very simple, yet effectual, method of restraining haemorrhage, being the subject of communication to the medical public. *ibid.*

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*Case of Croup.* By L. LEES<sup>E</sup>, Surgeon.

IN transmitting the following case of croup, my motive is to exhibit the beneficial result of prompt and efficient measures in this rapid and fatal disease; without pretending to any novelty of treatment.

A family in the city, in the year 1815, possessed two remarkable fine children, both of whom they lost in the month of October of that year, in one week, by croup. On the 5th of October, of the present year, I was called early in the morning to a very fine child of the same parents, aged nine months, whom I found with most decided symptoms of croup. Pulse 160°, and interrupted. I immediately ordered ten leeches to be applied to the throat, an ounce mixture with four grains of tartarized antimony, a tepid bath every three hours, and a fomentation to the throat every hour from the falling off of the leeches; the good effect of these remedies was apparent in a few hours, and before the following morning they had removed symptoms that threatened speedily to extinguish life.

I am decidedly of opinion, that had there been any delay in the application, or want of entire confidence and active co-operation on the part of the parents, and others of the family, this

child would also have been lost in less than forty hours, as both the others were.

I am hereby induced to recommend the employment of persons who are in the habit of providing and applying leeches; in the due application of which we are often disappointed: when a given number are sent for, they are frequently attempted to be applied by inapt persons, or the leeches may be inert: in the present case a woman was sent for them, who brought a great number, so that if some did not readily adhere, others were at hand, the patient thereby saved from fatigue, and delay prevented. By this mode, in many cases, highly important results may be gained or avoided,—no less than life or death.—*ib.*

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*Cases of Asphyxia.*—Under the present section we may properly introduce a very interesting account of the asphyxia of privies, which has lately been published in one of the French journals.\*

Three masons employed in repairing a privy which had been emptied about a fortnight, were in the act of clearing out some water accumulated in it, when a large additional quantity rushed suddenly upon them, and gave out effluvia so extremely offensive as to suffocate one of the men, who had been removing a stone at the point from whence it issued. He struggled for some time in the mud before he became insensible. A comrade in the attempt to rescue him, fell also. The father of the first, witnessing the danger of his son, ran to give assistance, and shared the fate of his predecessor. All three were speedily extricated, and conveyed at nine o'clock in the morning to the Hotel Dieu.

The first brought in was the weakest of the two younger men. He was the first who fell into the privy, and was the last extricated. He was aged 21, and of good constitution. On examination he was found wholly void of consciousness, sense, and motion. The body was cold; lips violet; and countenance livid. A bloody froth issued from the mouth. The eyes were dim, and the pupils immovably dilated. The pulsations of the radial artery were small and frequent; those of the heart irregular and tumultuous; respiration short, difficult, and convulsive; and the limbs relaxed. The patient, exposed on a bed to the air, was made to inhale oxygenated muriatic acid gas, which procured a momentary excitement. A vein was opened in both arms successively, the first not yielding a sufficient quantity of blood. After this the pulsation of the heart be-

\* *Nouveau Journal de Médecine.* Avril, 1818.

came more regular, and the pulse somewhat developed. Respiration also was less difficult; but the surface continued cold, and the face livid. Frictions were now employed on the trunk and extremities; and an ethereal draught administered. The mouth ceased to foam; the exhaustion was less menacing; and the patient uttered at times a plaintive sound. Soon afterwards he became violently agitated, and continued so for two hours; in consequence of which the cold bath, with cold affusions, was had recourse to. Immersion seemed at first to aggravate the symptoms. Respiration grew very difficult; the motions more violent; the face pale. The brachial vein bled afresh to a very large amount. The patient was conveyed in a state of syncope, cold and motionless, to his bed. The pulse was scarcely perceptible; respiration panting. After some hours he revived, and frictions with warm cloths were employed. The pulse then rose; the skin became warm and covered with a genial moisture, and the eyes half unclosed: yet respiration continued short and tight. At four o'clock the pulse was calm and regular, and the skin in a favourable state. Sinapisms applied to the feet at night produced active stimulation. The patient passed a tranquil night, and at three o'clock in the morning consciousness returned. From that time all the symptoms subsided, and restoration was complete on the third day.

The father, a strong man, aged 60, had been much less severely affected; and by the assistance of a draught speedily administered, had voided the water previously introduced into his stomach. His senses had been retained; but the whole body, and particularly the thoracic muscles, was agitated by convulsive motions. The jaws also were at times affected with spasm; skin cold; respiration irregular, and pulse much embarrassed. There was no frothing at the mouth, but frequent inclination to vomit. After two hours the spasms had subsided, and the pulse became regular; yet the nausea continued. By the employment of a large dose of ipecacuanha, a sulphuric acid potion, and a glyster, all the symptoms were on the morrow dissipated.

The third patient, aged 19, of a decidedly bilio-sanguineous temperament, with short neck, capacious chest, and muscles strongly marked, displayed the following phenomena. His agitation was extreme. All the muscles were affected with severe but transient contractions, succeeded by spasms, with curvature of the trunk backwards. He seemed to suffer acute pain; and his cries resembled the bellowing of a bull. The face was less pale than in the subject of the first case; the pupil dilated and immoveable, and the mouth filled with white froth. Res-

piration was convulsive; the action of the heart disordered, and the skin cold. Inhalation of oxygenated muriatic acid gas produced a powerful effect. A vein was opened in the arm, and the flow of blood was with difficulty suppressed. The motion and vociferation of the patient were such as to require confinement. An hour afterwards the cold-bath was employed; and a sort of stupor succeeded every act of affusion. Otherwise, the effects were similar to those experienced in the first case. The calm which ensued was of short duration, and the cries and contortions soon recommenced. Respiration became laborious and interrupted; the pulse thread-like, and of incalculable rapidity. In an hour afterwards the whole body was hot, although covered with perspiration. The face grew pale; the pulse weaker; the agitation gradually subsided; and in about two hours the patient died without having recovered his consciousness.—On dissection, forty hours after death, (the weather being then stormy) the head and trunk were already putrid; the skin bluish, and elevated by gas. The blood contained in the various cavities was black and fluid. The brain was greenish and tender. The bronchiæ displayed a red colour, progressively deepening as their minute divisions were traced. The posterior part of the lungs was gorged with black blood; but the organ was generally crepitous. The stomach presented traces of recent irritation, and several signs of irritation of a more remote date. The intestinal canal was greenish. The liver of a greenish black colour, was in a state of congestion. All the viscera exhaled the smell of putrid fish. The internal membrane of some of the larger vessels was of a bright red colour. Several of the persons present at the dissection were subsequently affected with lassitude, stupor, sleeplessness, and violent cholic.

Another interesting case of asphyxia by the gass extricated from stagnant water, has likewise been communicated by Dr. Chomel.\* We have not room to transcribe the particulars. Suffice it then to observe, that the subject of it, after having lain in a well three quarters of an hour without sense or motion was drawn up in a state of apparent death; that he presented symptoms very nearly resembling those described in the preceding cases; and that by the employment of venesection, inhalation of oxygenated muriatic acid gas, stimulant injections, an emetic which operated only by stool, an ethereal mixture, and sinapisms to the lower extremities, he was restored on the third day.

*Lond. Med. Repos.*

\* *Nouveau Journal de Medecine.* Juillet. 1818.

*Extirpation of the Parotid Gland.*—To those who correctly know, and will take the trouble calmly to review, the situation and connexions of this gland, its removal by the knife must really seem an enterprise of no common difficulty and peril. Several enlightened Surgeons have even gone so far as utterly to deny the practicability of such an operation. That it has, however, more than once been actually and successfully accomplished, the splendid page of British Surgery affords evidence sufficient to convince the most incredulous.\* A case, purporting to be of a similar description, has lately been published by M. Degland†; but whether in this instance the parotid itself were really extirpated, may be very fairly questioned. A swelling, of the volume of a nut, arose on the region of the right parotid gland, in an aged female, and gradually acquired the volume of a small hen's egg. It was hard, circumscribed, indolent, and *but little moveable*. Considered cancerous by M. Degland, it was cut out apparently with almost as little haemorrhage as ceremony. But the particulars of the operation are very imperfectly detailed. The tumor after excision presented an *ovoid figure*; and, on being cut into, gave issue to a yellowish, syrup-like, inodorous fluid, partly accumulated in the centre, and partly diffused through its substance. In colour and consistence it resembled the cartilages of the lumbar vertebræ. The wound was cicatrized in twenty-six days. The figure of the mass removed, its previous mobility, its anatomical character, the nature of the contained fluid, the neglect of any mention of the parotid duct,—all conspire to show, that instead of the parotid, a diseased lymphatic gland, mistaken for it, had probably been here removed. We hardly need add, that the parotid is of a *triangular form*, and *completely immovable* even in a healthy state. It will, moreover, be recollectcd, that an absorbent gland, extremely prone to morbid enlargement, lies imbedded in the centre of the parotid; and we doubt not but that M. Degland, if he had examined the part on which he had operated with sufficient attention, would have found the latter untouched, but reduced in bulk, like all other organs when subjected to continual pressure. We have been induced to notice the preceding case, as well with a view of reprobating the careless and unsatisfactory manner in which the disease and operation are described, as of impressing on the

\* For farther information on this subject, see the Medico-Chirurgical Journal, Vol. I. page 457.

† Nouveau Journal de Medecine. Juillet, 1818.

minds of Surgeons the practicability of extirpation of a diseased parotid gland with perfect safety and success. *Ibid.*

**Bronchocele.**—Professor Walter, of the university of Landshut, has lately published, respecting the treatment of bronchocele, a pamphlet\* which merits particular attention. He distinguishes the affection into four different species. In the first, which he names *aneurismal bronchocele*, the arteries, veins, and capillary vessels, are alike dilated. The second, or *lymphatic bronchocele*, seems to depend upon the effusion of coagulable lymph into the cellular structure of the thyroid gland. *Scirrhous* and *inflammatory bronchocele*, constitute the third and fourth divisions. Professor Walter's monograph is devoted exclusively to a consideration of the aneurismal species; and the following is one of the cases therein detailed:—A man, aged 24, had an enormous aneurismal bronchocele, which impeded both respiration and deglutition. The Professor made an incision one inch and a half in length at the point where the left superior thyroideal artery was seen to pulsate. A second incision, cautiously practised, laid bare the vessel; and after several smaller arteries had been secured, a ligature was passed round it. At the expiration of a fortnight, the left portion of the tumor was reduced at least one-third in volume. The ligature of the opposite artery was accomplished on the 17th of June, but in consequence of the vessel being covered by the enlarged thyroid gland, the operation occupied three quarters of an hour. On the 15th of July the patient left the hospital. At that time he swallowed with facility; and the bronchocele, sensibly reduced, hung down in the form of an empty sack. Two years afterwards, the Professor learned that the subject of this operation had entered into the army.

The result of this experiment is certainly calculated to counteract the unfavourable impression left upon the minds of Surgeons by the failure of a similar attempt made some years since in one of the London hospitals;† and would, doubtless, justify its repetition in any instance where the bronchocele, by its pressure on the oesophagus or trachea, menaced fatal consequences. In the unfortunate case to which we have alluded, death took place from secondary haemorrhage. We have no doubt that, if it were necessary, one or both of the inferior thyroideal arteries might also be tied by any Surgeon correctly

\* Bulletin de la Société Médicale d'Emulation. Juillet, 1818.

† This case, if we mistake not, is mentioned in Mr. Hodgson's admirable Treatise on the Diseases of Arteries; but we are unable, at this moment, to refer to it.—EDIT.

acquainted, as all Surgeons ought to be, with the relative anatomy of the parts upon which he was operating. *Ibid.*

*Cœsarean Operation.*—Examples of the success of this daring and terrible operation have hitherto been so rare among us, that we feel great anxiety to collect, and consider it our duty to record, every well authenticated case, of recent occurrence, where the fortitude of the patient, and the zeal and intrepidity of the Surgeon, have been crowned with the recompense which they so eminently merit. The two cases about to be transcribed are of this gratifying description. The last, although, strictly speaking, rather a case of *gastrotomy* than of Cœsarean operation, will be read with peculiar interest.

The subject of the first history\* to be noticed, was a woman, aged 32, of very diminutive stature, the aperture of whose pelvis measured but two inches in the antico-posterior direction, and three in the oblique. The waters had been discharged twenty-four hours, and the infant displayed evident signs of life. The operation was performed in the following manner by Dr. Mergault:—A longitudinal incision of five inches was made on the right side of the abdomen, about two inches above the umbilicus. The muscles, peritonæum, and uterus, were successively incised in the same direction. The wound of the uterus corresponded with the insertion of the placenta, which, consequently, was divided by the scalpel. The hand was then introduced into the uterine cavity, and the child seized by the feet, and extracted living. The placenta was afterwards removed, and the uterus cleared from its contained coagula. The wound, its edges being supported in contact by three sutures, was dressed in the usual manner. The state of the woman continued for some days favourable; but from the fifth to the sixth abdominal pains came on accompanied with fever. An ichorous and offensive pus issued in abundance from the vagina and the wound. During a fortnight's continuance of these symptoms, the cinchona was administered. In order to facilitate the escape of the pus, the inferior angle of the wound was subsequently dilated. From this period the woman rapidly improved; and was, on the fiftieth day, perfectly re-established.

The other case occurred last year at Parma, and has been communicated to the Société Médicale d'Emulation by Dr. Franck, whose name will be received as a sufficient pledge of the authenticity and correctness of the ensuing narrative†:—

\* Recueil périodique de la Société de Médecine de Paris. Juillet, 1818.

† Bulletin de la Société Medicale d'Emulation. Juillet, 1818.

A woman, aged 28, was seized with labour of her fifth child on the 28th of August. About midnight the child had descended within the pelvic cavity. The membranes were yet unbroken; when, after a most violent pain, the child's head suddenly retreated, and the woman experienced dreadful agony and vomiting. The Surgeon in attendance mistaking the nature of the case, recommended delay. About six o'clock A. M. two other gentlemen were summoned, and after hearing what had passed, and examining the abdomen, were convinced that the child had escaped transversely into that cavity, between the stomach and umbilicus. The uterine orifice was closed in the same way as it commonly is six hours after delivery. The operation of gastrotomy was now determined on as the only resource, and performed at eight o'clock by Ceceoni, Surgeon to the hospital, in the presence of several other professional gentlemen. The situation of the child having been correctly ascertained, with its head near the liver, and its feet in the left hypochondrium of the mother, an incision to the extent of five inches was made in this region. On penetrating into the abdominal cavity a quantity of bloody water rushed out. The intestines being cautiously confined by the assistants, the operator found without difficulty both feet of the child in succession, and thus accomplished its extraction. It was of the full grown size, but dead. The umbilical chord and placenta were afterwards removed. The wound was then united by suture, but with the precaution of leaving an aperture in a situation favourable to the discharge of any fluid.

The lochia made their appearance naturally. No untoward symptom supervened. The abdominal wound was completely cicatrized in three weeks, and shortly afterwards the woman's health was quite restored. Had the nature of the accident been ascertained a few hours earlier, and the operation been promptly executed, it is highly probable that the child would have been saved, as in the preceding case.

*Ibid.*

*New Substitute for the Cinchona.*—The ensuing is a correct sketch of the statement respecting a new kind of febrifuge bark, which has lately been published by Drs. Virey\* and Cloquet,† in two of the French journals. M. Bose, member of the Academy of Sciences, has received a specimen of it from M. Hubert, botanist at the isle of Bourbon.

The substance in question, the bark of a shrub, is indiscriminately employed by the negroes of Madagascar, and the cre-

\* Journal Universel des Sciences Medicales. Aout, 1818.

† Nouveau Journal de Medecine. Septembre, 1818.

oles of the other African islands, against the fevers so common in those southern latitudes. It is both administered internally in decoction, and applied to the temples and hands in the form of powder moistened with vinegar.

This bark is rolled up like that variety of *cinchona cordifolia* which comes from Loxa. Its epidermis is fawn-coloured, and covered in patches with specks of a yellow farinous matter, but less abundantly than that of the *Angustura ferruginea*. The texture of this epidermis, about one line in thickness, is granular, its taste bitter and aromatic. The more internal part of the bark, or liber, is of a reddish-brown colour, and of a singularly bitter and pepper-like taste, with somewhat of the sweetish flavour of liquorice root. It presents, upon fracture, no resinous appearance.

The shrub which yields this bark grows very common in Asia and the African islands. It was first figured by Van Rheede, in his *Hortus Malabaricus*, under the name of the *Kaka-Toddali*. From Linné and Wildenow it has obtained the respective titles of *paullinia Asiatica*, and *scopolia aculeata*; and Jussieu has lastly called it *Toddalia*, from the designation which it bears on the coast of Malabar. It is a small, prickly, bushy shrub, and may be readily recognized by its flowers, in axillary pannicles, composed of a calyx divided into five teeth, corolla pentapetalous, stamens five, styles and stigmata three. The fruit is a berry of the size of a pea, containing five dry oval seeds. It is wrinkled, and full of volatile oil, resembling that of orange-peel. The leaves are alternate and dull, and covered, like those of the *Hypericum perforatum*, by minute translucent points. They are oval, lance-shaped, somewhat serrated, and even, like the stems and branches, armed with prickles. Hence, this shrub must belong to the class Pentandria, and order Trigynia, and to the natural family of *Terebinthaceæ* (of Jussieu) not far from the *brucea*, the astringent bark of which is also febrifuge and anti-dysenteric. The bark of the root is almost exclusively employed by the negroes.

Dr. Cloquet states, in conclusion, that he has lately received from Senegal a root almost completely resembling that of the *Toddalia*, and employed by the inhabitants for a similar purpose. The principal difference consists in the greater size and strength of the Senegal root. But no botanical notice having been sent with the latter, the plant from which it was obtained cannot, at present, be satisfactorily determined.—*Ibid.*

*Observations on particular Modes of Treatment recommended to assist Nature in her Efforts during Parturition; by F. T. H.*

ANY interposition of art in the operations of nature under parturition must appear censurable, when urged as a general maxim to be acted upon in those cases which the united testimony of all ages has shown do not require any artificial aid whatever: by such cases I mean that immense majority of labours which the powers of nature alone are known to be fully adequate to complete, with the most perfect safety both to the mother and child. That a great deal has been done in every age to assist nature in her efforts during parturition, is well known; nor is it to be wondered at that, at the present day, in countries where fanaticism and ignorance hold the place of reason and philosophy, many absurd practices still prevail in the management of this important function. It is, however, the object of the present paper to maintain, in opposition to the practice recommended by the late Dr. Osborne, but at the same time with the greatest respect for that gentleman's high attainments, that the mode of interfering in natural labours, by *retarding* the birth of the child, is as unnecessary and as objectionable as *accelerating* the birth would be: first, because labour is in itself a natural healthy function, and requires no more artificial aid than the function of respiration does; secondly, because retarding the delivery can no more justly be said to prevent those accidents which now and then occur after the birth of the child, than the accelerating the delivery can be said not to be the cause of them.

With regard to the first objection, on the ground of labour being in itself a natural healthy function, and consequently requiring no assistance from art, little need be said, when it is recollectcd how many women have had their labours safely concluded without the aid of any attendant. In many of such cases, no doubt, the uterus had acted with such vigour as would have inclined a person of Dr. Osborne's opinion to have retarded the birth of the child, to have secured a more speedy and safe expulsion of the placenta. But I appeal to those gentlemen who have frequently come into the lying-in room after the child has been born, how often have they found the placenta lying in the vagina, and how seldom any disagreeable symptom from want of contraction of the uterus? It may, I allow, occasionally have occurred that, in women of irritable habits of body, who have suddenly been delivered of children, and no attendant near them, that, from anxiety and apprehension of

danger, the uterus has either ceased to act altogether, or acted so irregularly, that the placenta has been retained: still such want of action, or irregularity of it, cannot fairly be attributable to the quick passage of the child through the os externum, when it is so well known, to every practitioner in midwifery, the powerful influence which passions of the mind exert over the action of the uterus.

With respect to the second objection to interfering in natural labour, by retarding delivery with a view to obviate the accidents that sometimes occur after the birth of the child, I have stated it to be as unjust to expect such a mode of practice to answer the end intended, as it would be to deny the possibility of the same accidents being produced by the opposite treatment. Now, it must be obvious that, either by forcibly dilating the external parts to facilitate the passage of the head through them, or after the head is born, dragging the body hastily through the os externum, the remainder of the labour,—viz. the expulsion of the placenta and subsequent contraction of the uterus,—may be rendered extremely tedious: for the external parts, being irritated by efforts used to dilate them, will sympathetically affect the uterus; and, if the recurrence of pain should not be entirely prevented, it will, in all probability, be of that kind which accompanies that partial and irregular contraction of the muscular fibres, known by the name of the hour-glass contraction of the uterus. The dragging the body hastily through the os externum after the exit of the head, will be likely to produce the same inconveniences, and even danger, where there is any disposition to flooding. But, though this is the opposite mode of conducting a natural labour to that recommended by Dr. Osborne, and now employed by many men of eminence, and which I allow to be not only erroneous but even sometimes dangerous, still I do not see that, on the present occasion, we can rationally found our practice on the maxim of Hippocrates, that “τα εναγματα των εναγμάτων εστιν ιρματα”; and, consequently, believe that the retarding the birth must be right. On the contrary, I contend that the retarding the birth does often fail to secure a speedy contraction of the uterus, and is even sometimes productive of the very inconveniences which I have above stated precipitancy of conduct may give rise to. And can such an effect be wondered at, when it is considered that, by retarding the birth, we are opposing an unnatural resistance in the room of a natural one, which has been happily overcome, and hereby stimulating the uterus to fruitless and fatiguing efforts, which, if not carried to such extent as ultimately to impair the powers of the uterus, will, no doubt, if the

efforts made to overcome the unnatural resistance be violent, dispose it to inflammation and severe after-pains. In cases even where the uterus has shown imperfect action, I do not see how offering resistance to the passage of the child can secure a more vigorous contraction after it is allowed to be expelled.

Dr. Clarke, of Dublin, has been in the habit of retarding the delivery in cases of imperfect action of the uterus; but he has also conjoined another sort of practice with this,—that of laying the hand upon the abdomen, and following the uterus in its contractions until the child is expelled. It is to the last practice, that of using the hand as a support to the uterus in these cases of weak action, that I attribute Dr. Clark's success; for, as muscles evidently have their power increased by giving support to them whilst in action,—as, for instance, in the extremities, where the muscles are bound down and supported by strong fasciæ,—so this analogous support of the hand will enable the uterus to act with increased power. Still, provided we are able in this way to increase the powers of action in the uterus, I believe that no good effect can reasonably be expected from increasing the resistance to the child's birth.

The object of what has been stated above, is to endeavour to prevent the interposition of art in ordinary natural labour, and to recommend that, in those cases where we think it necessary to do something to increase the powers of the parts concerned in parturition, that we imitate, as far as possible, the means which we see nature herself employed in other parts of the body to attain the same end,—viz. an increase of the power of action. I shall conclude by observing, that it never can be necessary or justifiable, in those who ought merely to be the ministers of nature, to presume to ordain the moment when she should complete her office.      *Lon. Med. & Phys. Jour.*

London, Feb. 10, 1819.

The *high operation* for the stone in the bladder has recently been introduced into practice at Paris, by M. SOUBERBIELLE, with extraordinary success; such, indeed, as should draw the serious attention of surgeons again to this mode of operating. It was performed twenty-seven times by M. S. in the space of one year, on male subjects, of from fifty to eighty-six years of age, except in one instance, where the patient was only fifteen. The operations were executed according to the method of Friar Cosmo; making the incision in the bladder from within outwardly, without having previously distended it by injections or retention of the urine. Mr. Carpe witnessed this operation

twice at Paris, and is said to think very favourable of its propriety in many cases.

The same method of performing lithotomy was a few months since performed at St. George's Hospital, by Sir EVERARD HOME, with the most favourable results, on a boy seven years of age : but, as some of the minor steps of the operation were effected in a peculiar manner, we shall detail the principal circumstances respecting it.

A sound was first passed into the bladder ; an incision was then made into the membranous part of the urethra, and a director introduced into the bladder ; when the staff was withdrawn. A bistoire cachée, somewhat in the form of a catheter, was then introduced along the director ; when the latter was removed, and the bistoire carried upwards until it pointed at the superior and anterior part of the bladder. An incision was made through the external integuments on the point of the bistoire, but which was not continued into the bladder : the division of the latter was effected by thrusting forward the cutting part of the bistoire cachée, so that its point passed out through the opening already made in the external integuments. The wound was then enlarged downwards by a common probe pointed bistoury, fitting a groove in the bistoire cachée. The stone was encysted, and it was necessary to separate it with the finger before the application of the forceps. A catheter of elastic gum was then passed through the lower opening into the bladder, and retained there, to prevent accumulation and extravasation of the urine, until the superior wound had healed.—*Ib.*

*Mode of checking Hæmorrhage consequent on the Extraction of Teeth.*—Mr. CULLEN, of Sheerness, recommends the following method for the treatment of the above frequent, and sometimes serious, accident :—

“Take a small, fine, vial cork, of a size adapted to the socket whence the tooth has been extracted and the hæmorrhage proceeds. Then, with a small dossil of lint, wet with aqua stypica, and put on the smallest end of the cork, push the cork into the bleeding orifice, pressing it firmly in, till it be, as it were, wedged in the socket ; and keep it there as long as may be necessary, desiring the patient to press against it with the teeth of the opposite jaw till the bleeding be stopped, which it is almost instantly. This acts as a tourniquet, and gives you time to use whatever other means you may deem requisite ; but it is seldom that any thing else is required.”

*Ibid.*

*On the Buffy Coat of the Blood during Inflammation, in Answer to Mr. Lanyon;* by a Member of the Royal College.

I FEEL much diffidence in trespassing upon the important pages of the Medical and Physical Journal, in order to elucidate the advantages derived from using several vessels to receive the blood, in blood-letting in inflammatory diseases.

Mr. Lanyon should have consulted authors before he put the question to the profession, and he would have found that, in all inflammatory diseases, the first-drawn blood scarcely ever shows any of the buffy coat, unless a very considerable portion is abstracted at once in a single vessel. I invariably adopt a practice, which I have ever considered too general to need publication, of permitting the blood to deposit in several vessels (tea-cups are the most proper), by which I have been better enabled to distinguish the stage or extent of inflammation. We never can draw a fair inference by allowing the blood to flow into a single vessel; for the flow of the blood at the commencement is generally sluggish and tardy, which allows it to coagulate very speedily, thus entangling those particles which afterwards swim upon the surface of the crassamentum, constituting this peculiarity, or buffy coat: presently the pulse, which before was labouring, and the arterial system much oppressed, rises from under the load of the constitution, the circulation is increased, and the jet of blood becomes uniform and steady. Now time has been allowed for the viscid and heterogenous ingredients to be more intimately united, the deposition is permitted to form gradually, and of course the buffy coat of the blood exhibits itself. This is constantly to be observed in bleeding patients during inflammatory stages of disease.

The blood may still be "homogeneous throughout," notwithstanding Mr. Lanyon's accident "would seem to argue the contrary;" for he may, with the utmost decorum, divest himself of entering into "idle speculations or useless hypothesis," by merely bringing to his recollection the laborious state of the pulse and consequent general depression, which never fail of being relieved during the flow of the blood. It would be a curious speculation, and probably not without some interest, to investigate the phenomena of the powers of life during venesection: it has been a subject commenced, but with very little advancement, owing probably to the inconvenience the subject of experiment, as well as the experimenter himself, would be exposed to.

Suffolk-street, London;  
February 6, 1819.

*Ibid.*

*Case of Tubercular Leprosy ; by M. ALIBERT.*

M. DUPUIS, a native of the north of France, had resided eleven years at Marseilles, and passed three campaigns in the army of Italy, when he went, in 1801, to the Isle of France ; where he remained nine years, enjoying good health. He had left that island several months, and was on the way to France, when, with the joy he felt in the expectation of soon seeing again his native country, he felt a dread that he should arrive there in a state of sickness. Within twenty-four hours after he had experienced the latter emotion, his body became covered with large patches of a reddish-violet colour, which were tender to the touch, but were not accompanied with derangement of the general health. On arriving home he consulted a physician, who merely directed the use of some bitter infusion and the warm-bath.

This treatment was continued for fifteen months without benefit ; when some other practitioner ordered sulphurous baths, and the frequent use of purgatives. Under the influence of these means, the blotches in part disappeared, and of those that remained a change of colour was observed. Some months afterwards, tubercles, of the size of a nut, appeared on the thighs and along the spine, containing puriform matter. Another physician was then consulted, who considered the disease to be syphilitic, and directed mercurials ; which were administered for a year without being productive of benefit. The patient then went to Rochefort, to see some persons who had resided in India, and were said to be well versed in the knowledge of such diseases. They recognized it as leprosy, and advised the use of sulphur and the baths of the water of Bagnères, both internally and externally. This advice was followed for two months ; when the patient returned home nearly in the same state as that in which he had left it.

After this, the legs became swelled, the skin hard and covered with scales, and large tubercles appeared on the face : the voice of the patient became altered, his sight weakened, and his breath fetid. After having been two months in the hospital at Rochefort, he went to Paris. The feet and legs were then much tumified, and the skin covering those parts hard and wrinkled ; it was also covered with elevations of a greyish colour, which gave to the extremities somewhat the appearance of those of the elephant. There were numerous violet-coloured blotches on the thighs, and several large pustules, covered with a thick crust confining a white, adhesive, and fetid matter. The trunk of the body was free from disease ; but the face had an hideous aspect : the loss of the hair of the eye-brows, the

eye-lashes, and the beard ; the deep wrinkles on the forehead ; the hard tubercles ; the yellow crusts covering the cheeks, particularly on the right side ; the largeness of the nose, and tumefaction of the lips,—gave to it an expression that was hardly human.

His sight was considerably weakened ; odours made but a slight impression on the pituitary membrane of the nostrils, which was in a state of ulceration ; the hearing was difficult ; the voice hoarse, and speech hardly to be understood ; and the sense of touch only remained about the extremities of the fingers, and on the palms of the hands ; the sense of taste remained unimpaired, but there were two large tubercles on the middle of the tongue, which arose from the cellular tissue beneath the mucous membrane. There was considerable stiffness in the articulations of the instep, which rendered walking extremely slow and difficult. The trunk of the body alone was covered with a copious sweat during the night ; there was a frequent evacuation of the urine ; the pulse full, but very slow ; and the sleep, though long continued, interrupted by terrific dreams.

Sulphurous baths and fumigations, and the use of sulphur and arsenic internally, judiciously exhibited, have produced so much amelioration in this disease, as to lead to an expectation that a cure of it will at length be effected.\* *Ibid.*

#### *Description of Professor DUPUYTREN'S Operation for Fistula Lacrymalis.*

THE extraordinary and peculiar success with which the eminent surgeon above mentioned has for many years treated fistula lacrymalis, induces us to intrude on the attention of our readers (many of whom, we presume, are unacquainted with it,) a brief description of his mode of operating for the cure of that disease.

An incision is first made in the anterior part of the lacrymal sac, through which a golden canula, appropriate in its shape and dimension to the course of the lacrymal duct and the age of the patient,† is introduced into the lacrymal duct, and, by means of a round-pointed stilette (having a handle two inches in length, making an obtuse angle of about 120 degrees with the other part, which is about twenty lines in length, and of a con-

\* *Journal complementaire du Dict. des Sciences Med.* tome ii.

† A description of the canula could not be conveyed with sufficient accuracy, without a graphical representation of it. That instrument may be obtained from Lesueur, surgical instrument maker, Rue des Mathurins-Sorbonne, at Paris.

ical shape,) it is carried below the artificial opening, and reaches the level of the nasal fossa. The wound in the lacrymal sac is then covered with adhesive plaster, and usually cicatrizes in a day or two; when the disease is cured. In a few instances, however, the canula produces a degree of inflammation of the lacrymal duct and sac, which is productive of a little inconvenience; but hardly ever such as to prevent the final success of the operation. In a very few cases, also, the presence of the canula seems to produce retroverted action of the duct, and the instrument is forced upwards, and causes inflammation of the lacrymal sac: this accident is remedied by restoring the canula to its former situation, and keeping it there by pressure, if necessary. The canula (it is obvious, we presume, from the above description,) is suffered to remain in the lacrymal duct; and this appears to be the only mode of treating fistula lacrymalis, hitherto employed, that is permanently efficacious in the greater proportion of the cases of that disease. *Ibid.*

*Cure of paralysis by cicatrization of the substance of the brain.*—Effusions of blood or abscesses, occurring in an organ of such delicate structure as the brain, were considered by Morgagni absolutely incurable: and such has generally been the opinion and language of the most celebrated Physicians of the present day. Yet paralysis has invariably its origin in organic alteration of the brain, cerebellum, or other portion of the nervous system: and if nature be really inadequate to the reparation of such ravages, the disease which they occasion must necessarily be incurable. This conclusion, however, is invalidated by facts; and it is the object of Dr. Serres to develope the mechanism employed by nature in the cure of paralysis. In order to prevent misconception respecting his views, the following questions are proposed:—Is a cavity formed in the substance of the brain, or other part of the nervous system, susceptible of obliteration? Can the brain be regenerated after having been, to a certain extent, altered or even destroyed? And is the paralysis dependent on such organic lesions curable?

Dr. Serres acknowledges that there has been a time when, with Morgagni, he would have replied to these questions in the negative. Farther observation has, however, at length convinced him that all the resources of nature are yet unknown. The facts to which he appeals in proof of the correctness of his new opinions remain to be detailed.

*First Case.*—A clockmaker who had recovered from cerebral apoplexy, complicated with perfect hemiplegia of the right side, was admitted into the Hospital of la Pitié, under the man-

agement of Dr. Serres. Six weeks afterwards he walked, and began to use his right arm : but being at this period abused and abandoned by a woman with whom he had cohabited, he died in a few hours after receiving the intelligence of her desertion. On dissection, Dr. Serres, was astonished to find the cavity formed in the brain by the apoplectic seizure almost wholly obliterated. It occupied the medullary centre of the organ, distant about five lines from the optic thalamus and corpus striatum. Complete re-union had taken place in its posterior part, about an inch and a half in extent. Between the lips of the division was found a white, rather faded, and in some parts bluish substance. The anterior portion not being entirely closed, an interval of two or three lines existed there. Cellular meshes passed from side to side ; and the areolæ contained some drops of a yellowish fluid. Its internal parietes exhibited numerous granulations resembling those commonly designated fleshy vegetations. The surrounding substance was injected, and had acquired, to the distance of some lines, a yellow vinous colour ; apparently indicating that the cavity had possessed greater length than depth. "Here," observed Dr. Serres to the students who witnessed the dissection, "is naturally explained the cessation of the paralysis, of which we have watched the progress. Nature has proceeded in this case as in the solution of continuity of bone or muscle. Had the patient survived the effect of the moral commotion beneath which he sank, the cicatrization of the cerebral lesion, and consequently the cure of the hemiplegia, would probably have been completed in a few weeks."

After some time the practice of Dr. Serres afforded a fresh opportunity of verifying this important fact.

*Second Case.*—A water-carrier had so far recovered from an attack of apoplexy, complicated with hemiplegia, as to resume his wonted occupations. His former habits of intoxication were, however, unchanged. One Sunday evening, on his return from a tavern, he was stricken with apoplexy, and lay in the street till morning, when he was conveyed to la Pitié. It appeared from the report of his wife, that previously to this attack he had been constantly at work, and had even about a fortnight since joined in the amusement of dancing. The man was now insensible, and completely paralysed on the left side ; but when severely pinched he moved the right. Respiration participating the paralytic affection, he died on the third day.

The return of motion on the former attack, which took place ten months previously, had been very gradual. It was first manifested in the inferior extremity. Repeated dissections

had convinced Dr. Serres that in this case the left hemisphere of the brain had been, to a certain extent, disorganized ; and that from such disorganization the hemiplegia had resulted. But what changes had taken place in the left hemisphere during the recovery ? And what was become of the cerebral lesion upon which the paralysis had been dependent ?—These interesting questions, dissection of the body enabled Dr. Serres most clearly to elucidate. The left hemisphere of the brain was first cut down by slices to the medullary centre. Here the cerebral substance was observed to assume a yellowish colour, and to be speckled with capillary blood-vessels. The handle of the scalpel was now employed to scrape it away ; and at length a large cicatrix was discovered, resembling in figure an undulatory line, and extending in an antico-posterior direction. Complete re-union had taken place between the borders of this cerebral wound ; in the centre of the line of re-union, the brain exhibited a blackish blue colour ; and in the vicinity of the lesion the cerebral substance was considerably firmer than elsewhere. The borders of the cicatrix could not be separated without laceration of the surrounding structure. After two days' maceration in distilled water, minute cellular areolæ, somewhat resembling honey-comb, were perceptible on the line of cicatrization ; but they were scattered here and there, and did not communicate with each other : and so firm had the cicatrix become, that it was impossible to restore the cyst to its primitive state.

*Third Case.*—A man who had recovered from apoplexy in l'Hotel Dieu, was sent to la Pitié for the treatment of the hemiplegia with which it had been complicated. The progress of recovery was uninterrupted, and the cicatrix apparently formed with corresponding rapidity. While yet imperfectly restored, and tottering, he had the misfortune to fall from a high scaffold and fracture several of his ribs. The paralysis of the left side immediately returned, although the loss of motion was not so complete as it had been on the former attack. He died, and the following was the state of the brain exhibited on dissection : In the centre of the right hemisphere was found a recent cicatrix, the circumference of which displayed an aspect nearly resembling that mentioned in the preceding cases. The lips of the cicatrix were yet completely united at both extremities, but it had been ruptured at the middle part, and thus was formed an excavation capable of containing a musket-ball. Effused blood, proceeded from the rupture of the internal capillaries of the cyst, occupied the interior, and separated the borders of the cavity. The yet adherent portions were separated without much difficulty.

This case serves, in Dr. Serres's opinion, to complete the theory of paralysis by the formation of a cicatrix in the substance of the brain. For it is evident that the cyst had been completely obliterated, and that the fall had destroyed the central part of the cicatrix, ruptured the capillaries, and produced the sanguineous effusion. Nor is it less obvious that the paralysis had disappeared with the formation of the cicatrix, and recurred afresh on the production of a new cyst. In a work which he is about to publish on apoplexy and paralysis, Dr. Serres promises to adduce additional facts illustrative of the relation between the recurrence of paralysis and the destruction of cerebral cicatrices, or the formation of new cysts besides the old one. At present he contents himself with drawing from these cases the important conclusion, that *cysts formed in the substance of the brain, as well as the paralysis dependent on them, are certainly curable, and that the process of re-organization is the same in the encephalon as in other organs.*

*Lond. Med. Repos.*

*Poisoning by colocynth.*—The following examples of the poisonous effects produced by the internal employment of colocynth (*cucumis colocynthis*) are recorded by Professor Orfila, in the second edition of his celebrated treatise on Poisons,\* which has recently been published.

1. A sadler, aged twenty-eight, who had been subject to the haemorrhoids, had for some time complained of pains in the stomach, and other symptoms of indigestion. This affection, his companion, a German workman, promised radically to remove by means of a popular remedy; and with this view, two glasses of a bitter decoction, subsequently proved to be that of colocynth, were administered. Frequent alvine evacuations, accompanied with colic, were the first consequences of its ingestion; and some hours afterwards the man complained of great heat in the bowels, of a sense of dryness in the fauces, and unquenchable thirst. In the evening professional assistance was obtained, without, however, exposing the real origin of the symptoms. The patient had a small and extremely rapid pulse. The tongue was red, the abdomen tense and highly intolerant of pressure, with very violent pain fixed in the vicinity of the umbilicus. No faeces had been discharged. Venesection, emollient fomentations and injections, and chicken broth, were prescribed. The man passed a restless night. On the following morning the abdomen was still more swollen and painful.

\* Bulletin de la Société Médicale d'Emulation. Novembre, 1818.

A vein was again opened and the tepid bath employed. Six hours afterwards, farther aggravation of the pain and retention of urine, with painful retraction of the testicles. The abdomen was now covered with fomentations; blood also was drawn from it by cupping, and twelve leeches were applied to the region of the anus. At the same time an emulsion of gum acacia, and emollient injections with nitre, were prescribed. On the morning of the third day all the symptoms, the retention of urine excepted, still continued without abatement. The pulse was small and thready. The cough and coldness of the extremities supervened. The head and thorax were bathed in a clammy perspiration, and the occurrence of gangrene was apprehended. Towards night the pains subsided, the abdomen became less tense, and exhibited signs of fluctuation. The attendants were for a while elated by this seeming amelioration, but the man died before morning. An acknowledgment was now made by his wife of the act of imprudence which had been committed. On dissection, the abdominal viscera exhibited marks of the most violent disorder. The peritoneal cavity was filled with a whitish fluid, containing flocculi of the same colour. The intestines were reddened, and thickly studded with black specks. Most of them were either adherent or covered with adventitious membrane. The mucous coat of the stomach was detached and ulcerated, and the peritonæum in an almost putrid condition. Traces of inflammation existed also in the liver, kidneys, and bladder.

2. The friend of Professor Orfila, by whom this case has been communicated, was likewise called to a young woman, who had just swallowed half a glassful of bitter decoction prescribed by the same German empiric. Violent pains in the abdomen were immediately felt. A preparation of colocynth was at once recognized in the remaining decoction, and the symptoms speedily gave way to the employment of baths, oily and mucilaginous drinks, and opiates.

3. A baker, labouring under quartan fever and cachexy, took the same remedy, suffered severely from it, and lost his fever. Yet he continued feeble and languid, with a leaden complexion, and died, after six months, from an attack of paralysis.

*Ibid.*

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*Arsenic taken without injury.*—The object of this communication is to diffuse more generally the opinion that charcoal is eminently an antidote to arsenic: from our knowledge of chemistry we have reason to expect it should be, but we ought not to trust to theory without some experience...

Mr. R—— took last evening, through mistake, a considerable quantity of arseniate of potash; he had previously been visited with a severe pain in the head, from uncommon exertion during the day, and had taken his supper immediately upon the top of the dose of arsenic: some suspicions were now excited, and assistance sent for, which fortunately was near.

Found him with a quick pulse, considerable prostration of strength, a sense of heat over the whole body, pricking in the limbs, the headache gone, a disagreeable dry sensation in the throat, and some degree of anxiety, as might be expected.

Gave twenty-five grains of sulphate of zinc, which produced a very little sickness: after waiting fifteen minutes, gave, at short intervals, twelve grains more, together with half an ounce of pulverized charcoal, suspended in a teacup of water: no sickness produced, but the heat and pricking were no longer felt, and the pulse became moderate.

Ordered half an ounce of charcoal and water as before; a table-spoonful of which to be given every fifteen minutes: an ounce of ol. ricini, to be repeated at an interval of four hours, should not the first quantity operate; and left him for the night.

Found this morning that he has slept comfortably most of the night, has taken two ounces of oil, which has operated profusely and frequently; has no thirst or sickness at stomach; pulse slow and regular; tongue swollen and pale, but lively at the margin; countenance good, and he will be able to attend to his ordinary business shortly.

*Conclusions.*—That the charcoal was the only agent in counteracting the effects of the poison; and was the cause, together with the torpor of the stomach, of his not puking from thirty-seven grains of white vitriol.

That the dose of vitriol retained in the system must have produced an uncommon paroxysm of thirst, had it not been for the exhibition of carbon; and therefore that all metallic oxides must be inert, when given with the medicine.

That with a view of inverting the action of the stomach, vegetable emetics, and not mineral, should be resorted to, such as oxymel of squills, ipecacuanha, apocynum androsæmifolium, lycopodium, selago, and, above all, the distilled water of ranunculus flammula, the operation of which is said by Dr. Withering (a respectable writer) to be immediate.

*Note.*—There are two varieties of r. flammula, but both frequent the same soil, and consequently possess the same properties. The virtues of this plant (r. f.) ought to be investigated; the sensible qualities are such as to deserve attention; and the name of Dr. Withering ought to be sufficient to give it a place in the *materia medica*.

*Obstruction of the Thoracic Duct.*—A boy aged eight, was admitted into Stutgard Hospital on account of obstinate tinea. His spine was very much distorted ; and he was so greatly emaciated as rather to resemble a skeleton than a living body. Abandoned from birth by his parents, he had been subjected to the mal-treatment of needy and negligent relations. Destitute of sufficient covering and of bed, the poor creature had suffered dreadfully, during the preceding hard winter, from the inclemencies of the season. For several months past, a little bread and brandy had constituted his only nourishment. He some time since had been seized with incessant vomiting : his fæces were scanty ; and all his joints so stiff that he was nearly incapable of motion. The pulse was small and rapid ; the temperature of the surface reduced ; and the appetite for food insatiable. After three months' perseverance in the employment of the tepid bath, nutritious diet, and external remedies, the boy was much improved in strength, appearance, and the use of his limbs ; and in the commencement of winter he left the hospital. Attention to his moral and physical education was not neglected ; and for a whole year he remained well. About the close of the following winter, a tumor, with evident suppuration, was observed at the inferior angle of the left scapula, and increased, within a short time, so as to reach the tenth rib. Upon incision, there escaped a considerable quantity of lymph, mixed with cheesy flakes. The discharge was kept up by the introduction of a seton, and the patient supported by nourishing food and cinchona. Emaciation excepted, he was now perfectly well. The discharge, after gradually diminishing, completely ceased in August. But the cavity of the abscess was found, on the introduction of the probe, to be quite as large as in the commencement.

The cessation of the discharge was followed by violent vomiting and diarrœa ; and the patient sunk rapidly, without the presence of any decided febrile symptoms. After some days these phenomena subsided, and a fresh abscess formed below the first. It soon broke spontaneously, and gave issue to a small quantity of lymph. The patient grew daily weaker ; his respiration difficult and pulse accelerated. On the 24th of August he was suddenly seized with convulsions which, after continuing twenty-four hours, terminated in death on the evening of the 25th. Till the convulsive seizure, the patient had retained his recollection unimpaired. During the last four days, camphor and snake-root had been largely administered.

Upon dissection, on the 26th, the surface of the body was found covered with livid spots ; but there were no marks of

putrefaction. The vessels and sinuses of the dura mater were distended with black blood; and the vessels of the pia mater, even in their minutest ramifications, were most unusually gorged. The brain felt considerably indurated; and the convolutions lay so closely together as to give to the whole a turgid appearance. The substance of the brain itself, and that of the cerebellum, displayed no organic lesion. The lateral ventricles contained about four ounces of limpid fluid. The left lung was universally adherent to the costal pleura, and connected to the pericardium and diaphragm by a thick cellular structure. The lung itself possessed but half of its natural volume; and was compact, of a dark red colour, gorged with blood, but not tuberculated. The right was perfectly sound. An intimate adhesion subsisted between the pericardium and the heart. Its separation having been carefully effected, the surface of the heart itself was seen covered with numerous white tubercles of the size of a lentil. The adhesion had been formed by a thick red cellular structure. The proper membrane of the heart was thicker than common, and from it the white tubercles projected. The heart itself was in a natural state. After the complete removal of the thoracic viscera, a white mass, of the volume of a pigeon's egg, first presented itself: it was situated close to the vertebral column on the left side, about two fingers' breadth above the diaphragm. The cellular membrane was now carefully detached, and the following appearances were observed:—From the left rib a white mass of the thickness of a finger descended close by the spine to the diaphragm. It was in several parts tuberculated, and the largest prominence formed the mass which has just been described. From this mass several branches of variable thickness and length went off to the ribs. One of these, after having perforated the intercostal muscles, terminated in the cavity of the abscess. The whole of the mass, both trunk and branches, was invested with a delicate transparent membrane. From the point where this mass terminated above, *the membrane in question was continued in the form of an empty canal to the left subclavian vein*: yet the injection of air from the canal into the vein, or in the opposite direction, was utterly impracticable. The mass itself resembled in colour and consistence coagulated albumen, and imparted a greasy sensation to the finger. The cavity of the abscess extended over the whole left part of the back, from the inferior angle of the scapula to the sacrum. It had merely a covering of skin, and contained but a very small quantity of thin pus. Its parietes displayed a livid appearance. The spine was very much curved to the right. The left ribs were

completely flattened, but those of the opposite side unusually arched. The right cavity of the thorax was about twice as large as the left. The volume of each lung corresponded to the space of its containing cavity. Nothing particular was remarked in the abdomen. The omentum was much wasted, and the bladder distended with urine. The rectum contained some indurated fæces.

*Lond. Med. Repos.*

*Employment of the Prussiate of Quicksilver.*—Some intimations published by Professor Chaussier, respecting the anti-syphilitic properties of this substance, which he considers as preferable to every other mercurial preparation, seem first to have excited the attention of a Spanish Physician, Dr. Salamanca, to the remedy. And the facts detailed in his “Observations on the Utility of Prussiate of Mercury in Obstinate Syphilis, and other Lymphatic Diseases,”\* tend strongly to support the opinion of the Parisian Professor. We shall transcribe two out of the six cases here recorded, as sufficiently illustrative of the employment and operation of this powerful compound.

*First Case.*—The subject of this was a merchant of Gibraltar, aged 34, of highly bilious temperament and extreme irritability. For two years he had suffered from a syphilitic taint, for which mercurial frictions had been twice unsuccessfully prescribed. Besides pains of the bones, aggravated at night, there existed signs of congestion of the liver. Other mercurial preparations, venesection, cinchona, and opium, had proved equally unavailing. The patient, disappointed of relief, and sensible of his increasing debility, resorted to Dr. Salamanca; who finding the disease accompanied with considerable emaciation, hectic fever, cough, colliquative sweats, a lateritious condition of the urine, and tumefaction in the region of the liver, requested a consultation with two other Physicians. The malady was pronounced to be an incurable hepatic phthisis. Yet Dr. Salamanca, in order to satisfy his patient, prescribed tonics, opium at night, and a blister on the right hypochondrium. Perseverance in this plan for some days was productive of relief. The cough and fever yet continuing obstinate, Dr. Salamanca directed his patient to take in a little water every morning one table-spoonful of a solution of four grains of prussiate of quicksilver in six ounces of distilled water; at noon, decoction of cinchona and guaiacum was exhibited; and at night, opium with benzoic acid. The first six days the mercurial so-

\* Observaciones Medicas sobre la Utilidad del Prussiato de Mercurio, &c. Bulletin de la Société Médicale d'Emulation. Août, 1818.

lution excited bilious vomiting; but subsequently it operated only by stool. After submission to this treatment for nearly a month, the fever began to remit during long intervals; the cough diminished, and was attended with sero-purulent expectoration; and both these, and all the other symptoms finally yielded to the plan, assisted by the repeated application of blisters. The patient returned to Gibraltar perfectly recovered.

*Fourth Case.*—A young lady, aged fifteen, had for four years been affected with scrofulous ulcerations of the neck. Mercurials, tepid and mineral baths, carbonate of soda, muriate of barytes, and other remedies, had been tried without effect; when Dr. Salamanca prescribed a solution of four grains of prussiate of quicksilver in eight ounces of distilled water, one table spoonful of which was to be taken every day fasting. For the few first days slight vomiting was induced, but shortly afterwards the ulcers began to yield a more copious lymphatic discharge, and three out of five were soon completely cicatrized. The cure was accomplished in four months. The lady almost immediately married, and one of the two children which she has borne, displayed the traces of a similar affection; but at the period of Dr. Salamanca's communication the tumors were disappearing under the use of the prussiate of quicksilver in minute doses. The Spanish Physician has also prescribed this remedy with signal success in confirmed, and otherwise incurable herpetic and psoric complaints.

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*Some Observations on the alliaceous Odour of White Arsenic; by Dr. PARIS.\**—After the various controversies upon the subject of arsenical tests, it is not a little singular that the discordance which exists in the different chemical works of authority, upon one of the most important characters of arsenious acid, should have escaped animadversion. *Does the arsenious acid, when volatilized, yield any alliaceous or perceptible odour?* The fact is, that, unless the arsenical vapour be deoxidized by the presence of some body which has a powerful affinity for oxygen, it is perfectly inodorous, the alliaceous, or garlic-like, smell being wholly confined to metallic arsenic in a state of vapour: such a deoxidation takes place when the arsenious acid is thrown upon ignited charcoal, or when heated in contact with those metallic bodies which readily unite with oxygen,—as antimony, tin, &c. It is stated by Orfila, and other chemists, that, if it be projected upon heated copper, the alliaceous odour is evolved. This certainly takes place if the

\* *Journal of Science and the Arts*, No. xii.

copper be in a state of ignition ; for, at that temperature, its affinity for oxygen enables it to reduce the arsenious acid : but, if a few grains of this substance be heated on a plate of copper, by means of a spirit-lamp or a blow-pipe, no odour is perceptible ; for the whole of the acid is dissipated before the copper acquires a sufficiently exalted temperature. If the arsenious acid be heated on a plate of zinc, the smell is not evolved until the zinc is in a state of fusion. If, instead of these metals, we employ in our experiments gold, silver, or platina, no alliaceous smell whatever is produced. *Lond. Med. & Phys. Jour.*

[From Dr. Thomson's Annals of Philosophy.]

*Action of Iron on Water.*—M. Guibourt has shewn by a set of experiments, which appear accurate, that iron has the property of decomposing water at the common temperature of the atmosphere. The decomposition is most rapid when the quantity of iron bears a great proportion to the quantity of water. In that case the temperature rises considerably, the decomposition goes on more rapidly in proportion as the temperature is more and more elevated.—(*Journ. de Pharm.* June, 1818, p. 241.)

M. Robiquet has ascertained that the black oxyde of iron formed by the action of water on iron at the ordinary temperature of the atmosphere, is exactly similar to the oxyde formed by the action of the red hot iron on steam. Now it is well known that this last oxyde is a compound of one atom of protoxide and one atom of peroxide. The octahedral iron ore of mineralogists is a similar compound.—(*Ibid* p. 308.)

*Carbonate of Iron.*—As far as we know at present, the only oxide of iron capable of combining with carbonic acid, is the protoxide. Carbonate of iron found native is a compound of an atom of carbonic acid and an atom of protoxide of iron. I have never been able to succeed in my attempts to form a precarbonate of iron, though analogy leads me to suspect the possibility of the existence of such a salt.

*Action of Prussian Blue on Starch.*—M. Vincent, an apothecary in France, has published the following curious fact. If four parts of Starch and one part of Prussian blue be mixed and triturated together in a mortar, so as to make as intimate a mixture as possible, and this mixture be boiled in a considerable quantity of water, the liquor, before it reaches the boiling temperature, acquires a green colour ; it then becomes brown, and there remains a precipitate, which does not recover its blue colour, though treated with acids. The liquor has the

property of forming a very fine Prussian blue, when treated with a solution of sulphate of iron mixed with an equal volume of solution of chlorine. When the liquid is evaporated, no gluey substance is deposited; but if it be reduced to a small volume, and allowed to cool, it gives a glutinous matter, which dries in the open air, and is again easily dissolved in water. The starch then is altered in its nature and converted into a kind of gum.—(Ibid. p. 325.)

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## Domestic.

### HARVARD UNIVERSITY.

By the votes of the Corporation of Harvard University approved by the Board of Overseers—

JACOB BIGELOW, M. D. is made Professor of Materia Medica, and WALTER CHANNING, M. D. Professor of Midwifery and Medical Jurisprudence. The attendance on the courses of Lectures of the Professors aforesaid will be required in order to a Degree of all persons, who shall be first matriculated in the Medical School after the next Commencement. Those students in Medicine, who have already begun their studies, will not be required to attend more than one course with each of the professors above named. The fees for these courses remain the same as heretofore.

JOHN T. KIRKLAND, *President.*

June 25, 1819.

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The following note was sent to us by Dr. Thacher, as an appendix to his case of *Tic dououreux*, published in this number of our Journal (page 209,) after that case had been printed off. We will take this occasion to remark, that we had some hesitation in publishing the case of Mrs. K. at present, fearful it might lead to error; for the time, during which relief had been obtained, was too short to justify the conclusion that a disease of so much obstinacy was overcome. We were induced however to insert the paper from a respect to the feelings of the author, not doubting that, if the cure should prove imperfect, he would make the result known to us, as he has in fact done in the following lines. ED.

"Recently it has been reported to me that two ladies who had long suffered the distressing effects of Tic douloureux had experienced immediate relief by the external and internal employment of the common hop. The flowers of hop enclosed in flannel and being moistened with warm vinegar were applied to the part affected and repeated frequently until relief was obtained, and a strong infusion of hops was taken internally at the same time, about half a tea-cup full every two hours. Soon after being apprized of this fact, application was made to me by a man who had laboured for ten years under this distressing disease. I directed him to the use of the hop by way of experiment. In two days he came rejoicing that every symptom of his complaint had yielded to this simple remedy. But unfortunately Mrs. K. whose case is detailed above, being visited with a return of her complaint, made a very persevering experiment with the hop, but without effect, and was obliged to resort to the pills of stramonium and ipecacuanha.

J. THACHER."

Plymouth, May 10th, 1819.

### *Medical Prize Questions.*

AT a meeting of the *Boylston Medical Committee of Harvard College*, held at the *Medical College* in Boston, April 7, 1819, it was voted, that the *Medal* of the Committee, or fifty dollars in money be awarded to the author of a dissertation on the Question, "Is there any communication from the stomach to the bladder, &c." who was found to be Enoch Hale, Jr. M. D. of Boston.

No dissertation on the other Question for 1818 was deemed worthy of the Medal; this question is accordingly continued; it has been announced in these words, "On the vegetable articles, the growth of the United States, which have been, or may be advantageously employed, as emetics or cathartics."

The Prize Questions for the present year, 1819, were published last spring, and in conformity to an alteration of the annual meeting of the Committee, and to a longer period given to the writers on the subjects proposed, dissertations on these questions may be transmitted, post paid to DAVID TOWNSEND, M. D. of Boston, on or before the first Wednesday in April 1820.

The authors of unsuccessful essays may obtain their dissertations from the Secretary if called for within a year.

JOHN G. COFFIN, Sec'y.

*Massachusetts Medical Society.*

AT the annual meeting of the Fellows of the Massachusetts Medical Society, held on the 2d day of June, A. D. 1819, the following gentlemen were elected Counsellors of the Society for the year ensuing, viz:—

*For the District of Suffolk*—Drs. David Townsend, Thomas Welsh, Aaron Dexter, William Spooner, James Mann, Samuel Adams, Asa Bullard, John G. Coffin, John Dixwell, James Jackson, Benj. Shurtleff, John C. Warren, John Gorham, John Randall.

*Essex*—Drs. Edward A. Holyoke, Joshua Fisher, Benj. L. Oliver, John D. Treadwell, Oliver Prescott, James Gardner, Nehemiah Cleveland, Nathaniel Bradstreet, Richard Hazeltine.

*Middlesex*—Drs. John Brooks, Josiah Bartlett, Isaac Hurd, Joseph Fiske, Amos Bancroft, Calvin Thomas, Wm. Gamage, Abiel Heywood, Rufus Wyman, James P. Chaplin.

*Worcester*—Drs. Oliver Fiske, Abraham Haskell, Austin Flint, Jonathan Osgood, Stephen Batcheller, jun. Sam'l Manning.

*Hampshire*—Drs. Peter Bryant, Elihu Dwight, Enos Smith, Wm. Hooker, Joseph H. Flint, Seth Lathrop, Alpheus F. Stone.

*Berkshire*—Drs. Timothy Child, Hugo Burghardt, Asa Burbank.

*Norfolk*—Drs. Amos Holbrook, John Bartlett, Abijah Richardson, Nathaniel Miller, Robert Thaxter.

*Plymouth*—Drs. James Thacher, Hector Orr, Cushing Otis.

*Bristol*—Drs. Samuel Perry, Benjamin Billings.

*York*—Drs. Abiel Hall, Joseph Gilman.

*Cumberland*—Drs. Ammi R. Mitchell, John Merrill, Gad Hitchcock, jun.

*Kennebec and Somerset*—Drs. James Parker, Benj. Page, jun. Ariel Mann, Moses Appleton.

*Lincoln, Hancock and Washington*—Drs. Benj. Brown, John Stockbridge, Isaac Lincoln.

At a Stated Meeting of the Counsellors of the Massachusetts Medical Society, held on the 3d day of June, A. D. 1819, the following gentlemen were elected Officers of the Society for the year ensuing viz :

JOSHUA FISHER, M. D. *President.*

THOMAS WELSH, M. D. *Vice President.*

JOHN C. WARREN, M. D. *Corresponding Secretary.*

JOHN DIXWELL, M. D. *Recording Secretary.*

JOHN GORHAM, M. D. *Treasurer.*

JOHN RANDALL, M. D. *Librarian.*

*Censors.*

AARON DEXTER, M. D.      JOSIAH BARTLETT, M. D.

WILLIAM SPOONER, M. D.      JAMES JACKSON, M. D.

JOHN DIXWELL, M. D.

Published from the records by order of the Counsellors.

JOHN DIXWELL, Rec. Sec:

THE following rules for the conduct of the Censors of the Massachusetts Medical Society, to be chosen by the Counsellors for the several districts of the commonwealth, agreeably to an act of the legislature, passed Feb. 19th, 1819, were adopted by the society at the annual meeting June 2d, 1819.

*Section 1st.* At the meetings of the Censors of this society, no vote shall be taken and no business transacted, except a vote on question of adjournment, unless three members of the board be present ; and, at all such meetings, the senior member present shall preside.

*Sec. 2d.* It shall be the duty of every Board of Censors, to appoint, at their first meeting, a secretary from their own body for the ensuing year. The duty of every secretary so appointed, shall be to keep a faithful record of the meetings and transactions of the Board by which he is appointed and to receive the fees for licences ; and likewise, at the termination of the year for which he shall be appointed, to transmit to the treasurer of this Society the monies he may have received as above, and to the corresponding secretary of this society a true copy of the records he may have made, in order that the same may be laid before the counsellors of the society.

*Sec. 3d.* Candidates for examination before any of the Boards of Censors shall, at or before one of the stated meetings of such Board, make application and give their names in writing to the secretary of such Board, and no candidate shall be examined except at a stated meeting of the Board to which he applies or at an adjournment of the same. At every such meeting the candidates shall be called upon in alphabetical order, and each candidate shall be examined separately and in private.

*Sec. 4th.* In every examination, the following course shall be pursued, viz.

*First,* The candidate shall be called upon for written testimonials of his having complied with the conditions required by the bye-laws of this society in respect to education, and it shall be especially inquired whether any portion of the time, which he has professed to devote to his professional education has been employed in keeping school, or any other occupation, and all

time so employed shall be deducted from the time professedly devoted to his medical education. Likewise the candidate's knowledge of the latin language, and of the principles of geometry and experimental philosophy, shall be carefully inquired into, and fully shewn, either by certificates from teachers of established reputation and good credit, or actual examination. In every case, where the censors are not fully satisfied on the points here stated, the examination shall close, and letters of approbation and licence shall be refused.

*Second.* In every case, where the Censors are fully satisfied on the points above stated, the candidate shall next be called upon for a list of the books he has read, and it shall be noticed whether this list includes the books required by the laws of this Society, and if he has not read the books so required, the examination shall close and not be renewed until he has read the same.

*Third.* The candidate, having passed through the preceding steps with approbation, shall next be examined in the following branches separately, viz. anatomy, physiology, chemistry, materia medica, midwifery, surgery, pathology and therapeutics; and in addition to such general inquiries as the Censors examining may think proper, they shall examine him particularly in some one of the books, required by the Society to be read by medical Students, on each of the subjects above mentioned.

*Fourth.* When the examination of a candidate has closed, he shall retire from the meeting of the Censors, and the Chairman shall then propose the following question, to which each Censor present, including the chairman, shall answer yea, or nay, viz. Does the candidate, who has now undergone examination, appear qualified to practise medicine, or surgery, or both (as the case may be) and to take charge of the lives and health of his fellow men? If the major part of the Censors present at his examination reply in the affirmative, he shall receive a letter of approbation and licence in the form prescribed by the bye-laws, he having paid the fee prescribed in the same; if otherwise, such letter shall be refused him.

*Fifth.* When any candidate presents himself to the Censors, who has been educated out of this Commonwealth, and offers testimonials to shew that he has undergone a proper education and has passed an examination with success before some competent body, agreeably to the second section of the law of this Commonwealth passed February 19th, 1819, entitled "An Act in addition to an Act regulating the practice of physic and surgery," the Censors shall institute an inquiry upon all and

any evidence, which shall come before them, whether the candidate has actually undergone as good an education as is required by the bye-laws of this Society, and whether the practice of the body, before whom such a candidate has been examined, has been such as to entitle their approbation to full respect; and if the evidence be altogether favourable, such candidate shall be permitted to receive a letter of licence from the Society in the form prescribed in the bye-laws; but, after examining the evidence in the case, if it do not appear that the education has been equal to that required by this Society, the candidate shall be rejected, and if it do not appear that the body which has examined the candidate is entitled to full respect, or if in any way the Censors are doubtful as to the qualifications of the candidate, they shall examine him themselves, and decide upon the case as if the candidate had never been examined before.

*Sixth.* It shall be the duty of the Secretary of each Board of Censors to notify the several meetings of the same, by advertisement in two newspapers published within the Medical District to which he belongs, one month at least, before the day of such meeting.

The foregoing rules have been adopted by the Society, and have been made to extend to particulars, with the design of rendering the practice in the different Boards of Censors uniform in every point. Should it however, appear from experience that this object is not attained, it will be considered the duty of any of its Fellows, who become apprized of this, and more especially of the Censors, to make the same known to the Society, that the proper amendments and additions may be adopted.

Copy from the records of the Society.

JOHN DIXWELL, Recording Secretary.

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### *National Pharmacopœia.*

AT a meeting of the Delegates from various Medical Societies and Institutions in the Eastern District of the United States, convened on the subject of a National Pharmacopœia, in Boston, on the first day of June, 1819—Present as Delegates the following gentlemen:—

From the Medical Society of *New-Hampshire*—Drs. Reuben D. Mussey, Ebenezer Learned, Matthias Spaulding, and John P. Batchelder.

From the Medical Society of *Massachusetts*—Drs. John C. Warren, John Gorham, Jacob Bigelow, James Thacher, and George C. Shattuck.

From the Medical Society of *Vermont*—Drs. Erastus Torrey and Selah Gridley.

From Brown University in *Rhode-Island*—Dr. William Ingalls.

From the Medical Society in *Rhode-Island*—Dr. Solomon Drowne.

From the Medical Society in *Connecticut*—Dr. Eli Ives.

The Convention made choice of Dr. WARREN, of Massachusetts, as Chairman, and Dr. BIGELOW, of do. as Secretary.

The Delegates being called on to submit their plans for a *Pharmacopœia*, it appeared that such a plan was prepared by the Delegates from *Massachusetts*, but that no other plan was in readiness to be submitted.

Whereupon, it was *Voted*, That the *Pharmacopœia* prepared by the Delegates from *Massachusetts* be adopted as the ground work of the *Pharmacopœia* of this Convention, and that a Committee of one person from each Delegation be appointed to suggest any alterations or amendments in the same, which are proper to be made.

The following gentlemen were appointed a Committee for the said purpose, viz.—Drs. MUSSEY, GORHAM, TORREY, INGALLS, and IVES.

The Convention adjourned till 6 o'clock, P. M. to hear the report of their Committee.

Met agreeably to adjournment, at 6 P. M.

The committee reported in part and had leave to sit again.

*VOTED*, That the same committee be instructed to report whether it is expedient for this Convention to send delegates to a National Convention at *Washington*, and if any, what number.

Adjourned to meet when the Committee should give notice that their report was ready.

*June 2.* The Convention met on being notified that their committee was ready to report.

The committee then reported certain additions and alterations, which were severally acted on by the Convention; after which the following sections of the report were adopted.

1. That the *Pharmacopœia* of the *Massachusetts Medical Society*, as it is now revised, be adopted by this convention as their *Pharmacopœia*; and be presented as such to the General Convention to be holden at *Washington* in January next.

2. That the number of delegates sent by this Convention to the General Convention shall be two, and that they shall be chosen by ballot.

The Convention then proceeded to the choice of two delegates to the General Convention by ballot, and Dr. IVES and Dr. BIGELOW were chosen.

It was voted that in case the delegates thus chosen should be prevented from giving their personal attendance at Washington, that they be empowered to depute a third person to represent this district in the General Convention.

In order to afford an opportunity for all further additions and improvements which might be proposed, the delegates were authorized to receive communications relative to the subject, and to transmit them to the General Convention.

*Voted, To adjourn sine die.*

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#### LATE FOREIGN PUBLICATIONS.

An Essay on the Diseases of the Excretory Parts of the Lachrymal Organs ; by William Mac Kenzie.

Aphorisms, illustrating natural and difficult Cases of Labour, Uterine Hæmorrhage, and Puerperal Peritonitis ; adapted to the use of Students ; by Andrew Blake, M. D.

The Quarterly Journal of Foreign Medicine and Surgery, and of the Sciences connected with them. No. II. for February, 1819.

Observations on Contagion, as it relates to the Plague and other Epidemic Diseases, and refers to the Regulations of Quarantine ; by a Physician.

An Essay on the Diagnosis between Erysipelas, Phlegmon, and Erythema ; with an Appendix, touching the probable Nature of Puerperal Fever ; by G. H. Weatherhead, M. D. &c.

Further Observations on the Internal Use of the Hydro-cyanic (Prussian) Acid in Pulmonary Complaints, Chronic Catarrhs, Spasmodic Coughs, Asthma, Hooping Cough, and some other Diseases ; with full Directions for the Preparation and Administration of that Medicine. By A. B. Granville, M.D. F.R.S. F.L.S. M.R.I. &c.

A Letter to the Right Hon. F. Robinson, M.P. on the Plague and Contagion, with Reference to the Quarantine Laws ; from A. B. Granville, M.D. F.R.S. F.L.S. M.R.I. &c.

Observations on the Inflammatory Endemic incidental to Strangers in the West-Indies from temperate Climates, commonly called the Yellow Fever ; as this Disease occurred to the Writer during a public Service of twenty Years in a majority of the West-India Colonies. By Nodes Dickinson, of the Royal College of Surgeons, &c.

An Inquiry into the Effects produced on the Brain, Lungs, and other Viscera, and on the Nervous System, by Diseases of the Liver. By Thomas Mills, M.D.

# The New-England Journal

OF

## MEDICINE AND SURGERY.

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*On the efficacy of Mercury in the treatment of Fever.* By  
DR. ABNER HOWE.

[Communicated for the New-England Journal of Medicine and Surgery.]

**A**S fever, in its various forms, destroys more of the human race, than any other disease, it demands the first and unwearyed attention of every physician, that its nature may be better understood and its termination less frequently fatal. Sydenham affirms, that the various forms of fever constitute two thirds of the diseases of mankind, and that as large a proportion as eight of nine of all who die, are cut off by febrile diseases.

Having had, for a number of years, an opportunity of paying some attention to fever in its various changes and terminations, I have drawn the following inferences from the observations of others, and my own experience;

1st. That idiopathic fever is a unit, and naturally admits of no division.

2d. That its type or character principally depends upon the state of the system at the commencement of the fever.

3d. That the preparations of mercury form the most efficacious means for the cure of this disease.

It being my principal design, in this communication, to state some facts, in confirmation of the efficacy of mercury in the cure of fever, I have selected for such purpose two cases, out of many, which have come under my observation.

It is generally unnecessary, and sometimes improper, that this remedy should be relied on in a state of fever, which is

highly inflammatory. The lancet, antimonials, neutral salts, &c. would more speedily effect the desired object. There sometimes occurs a form of fever, in which it might be injurious to exhibit this medicine. This takes place when from violent or long protracted disease, the system is reduced to that state of prostration, where debility, rather than disease, claims our first attention. With these exceptions, I believe, that all forms of fever, which, at any time, prevail in our climate, may be more successfully treated by mercurials, than by any other known remedies. These should not in all cases preclude the use of other medicines or means for the alleviation of particular symptoms, but on their effects our chief reliance should be placed.

In October, 1814, an epidemic fever prevailed in a part of Beverly. The severe cases were confined to one neighbourhood. In three or four families one or two only escaped the disease. About one case in seven proved fatal. The symptoms were those, which usually characterise the Typhus Gra-vior of writers. I shall select but one case out of about twenty, which fell under my care, to show the effects of mercury in this disease.

About the 25th of October, Mrs. W., aged 35, was attacked with the usual symptoms of the fever, a number having had the disease in the same neighbourhood, most of whom were at that time confined with it. After having premised an emetic and cathartic, I daily gave her preparations of mercury, principally the blue pill, and an aqueous solution of the muriate of mercury. When this practice had been continued about eight days, her mouth became sore, and all her symptoms were much better. Her pulse were less frequent and skin moist, her sleep was easy and quiet, and she was apparently recovering. I discontinued the medicine, deeming a longer use of it unnecessary. She remained in this state of hopeful convalescence about four days, when the soreness of her mouth become gradually better; and as this took place her fever rose again with all its former symptoms. In two or three days more, her mouth was entirely well, and the fever re-appeared with an aspect more alarming than before. Every attempt was again made to affect the system with the medicine, but all to no purpose; a diarrhoea took place, and in a few days my patient died. It may appear singular, that a fatal case is here selected to prove the efficacy of a medicine, especially as I might detail a number with symptoms more alarming, where recoveries followed a similar treatment. But this case affords a stronger proof of the powers of mercury

in fever, than a successful one could possibly do. The disease was obviously under the controul of the medicine; but my patient failed, because it was not continued a sufficient length of time. It ceased to have its peculiar effect, when used the second time, on account of the inverted action of the absorbents and an obstinate diarrhoea, which resisted the effects of all remedies.

The information which this unfortunate case afforded, enabled me to exhibit medicine with complete success, in every instance, which afterwards occurred during the prevalence of the epidemic. To make further details relative to the disease, which prevailed during that season, would be to relate recoveries, where preparations of mercury formed my sole reliance, and a faithful use of them was my constant practice.

August 25th, 1818. I visited Miss W., aged 17, of a plethoric habit, whose health had generally been good. Her fever commenced the evening before I saw her. She complained to the family of a pain in her head; and in a few minutes became delirious. When I saw her, her eyes were staring, her face red and somewhat bloated. She was wakeful and agitated by sudden noises. Would make frequent attempts to get off the bed, but was easily persuaded to do what was required of her. Her pulse were rather hard but not frequent. Her tongue was covered with a white coat. I drew from her arm about twelve ounces of blood, applied a large epispastic on the top of her head, and gave her ten grains of the sub-muriate of mercury. On the 26th, the delirium and other symptoms were the same as the day before. Directed that half a grain of calomel should be given every six hours, that an epispastic should be applied on each ankle, that the vesicated parts should be daily dressed with mercurial ointment, and that 25 drops of antimonial wine be given every six hours. This course, with small variations, was continued for eight days, when her mouth became a little sore. I then discontinued the calomel and ointment, and gave her small doses of the aqueous solution of the muriate of mercury. On the eleventh day from the attack, she became perfectly rational, and without any unusual symptom, had a rapid recovery.

This was one case of an epidemic, which prevailed in the north parish in Beverly during the months of July and August, 1818. The mortality was almost without a parallel in the practice of any physician. But two cases fell under my care, one of which I have detailed, the other was less violent, but equally fortunate in a recovery.

The disease was confined entirely to one section of the town. Of nine or ten cases, which occurred at the commencement of the epidemic, seven died, and one was a number of months in recovering from the effects of the disease. The one which I have related will give an idea of the most prominent symptoms, which characterized the fever. The head and nervous system were principally affected. The blood vessels were less diseased, than is common in so violent and fatal an epidemic. Delirium was an early symptom. In two instances death took place within 24 hours of the attack.—In three or four fatal cases, eruptions appeared on the arms, neck, and more or less over other parts of the body.

Emetics of all kinds were injurious. In one case delirium took place during the operation of an emetic, and the patient lived but 48 hours. Bleeding appeared to give no relief.—Powerful cathartics were hurtful. Blistering the head and neck was generally followed with some relief. Mild cathartics, diaphoretics and mercurials formed the only course which appeared to have any influence in checking the progress of this alarming and fatal disease.

Vegetables in a state of putrefaction were obviously the principal exciting cause of this epidemic. The first man who became diseased, had been employed two or three days before his attack, in clearing a cellar of rotten potatoes. It was related, that the man had more than fifty bushels in that state, which were carried from his house and thrown upon the ground. Unusual quantities of rain had fallen during the months of July and August, and most of the cellars in the north part of the town contained more or less water for a number of weeks.

Beverly, July 1819.

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*Case of Extra Uterine Conception.* By JAIRUS A. GREGG,  
M.D.

[Communicated in a letter to one of the Editors, for the New-England Journal of Medicine and Surgery.]

MRS. BICKFORD, of this town, was delivered of a living child in the winter of the year 1803, in the 20th year of her age; gestation previous to this delivery, was natural, when taken in labour her pains were lingering, and I have been credibly informed that a few minutes previous to the de-

livery of the child, the os uteri was hard and firm, not dilated sufficiently to admit the end of the finger, when the throes came on forcibly and expelled the child before the accoucheur obtained his place or gave the least assistance. From this firmness of the os uteri, and the force of the pains, it is supposed the os uteri was lacerated. She was confined several weeks with a puerperal fever. The child died in a few days, and the woman has ever since been very dyspeptic, troubled with uterine diseases, and apparently diseased ovaria. She has had a schirrus extirpated from her breast. For the most part, menstruation has continued monthly, but difficult. In November 1816, she became pregnant again as she thought. Her symptoms were the usual slight sickness or nausea, &c. but her catamenia continued monthly as before. I was called to visit her on the 28th of January, 1817, and gave it as my opinion that she was pregnant, although then labouring under a menstrual discharge and considerable debility, with darting pains, nausea, &c. I visited her frequently during the winter of 1817, and administered numerous medicines, tonics, mild chalybeates, alkalies, and even light shocks of electricity, all of which had no good effect, the stomach was so irritable, it would immediately eject all kinds of medicine and food. She frequently fasted 24 hours. The pulse was not frequent but full for the most part; venesection was performed and mucilaginous medicines given with no effect. She continued in this way until April, when she began to feel a quickening of the foetus, but very feeble and on one side and back only. I visited her through the spring and summer likewise, frequently administering medicine, &c. In July, the discharge appeared like a flooding or haemorrhage, from the uterus; venesection, astringents, saline draughts, &c. were administered, yet her turns continued monthly, and for nearly a week at a time. On the 18th of September, 1817, I was called first to her in labour. Her pains were almost incessant and very distressing, but did not forward labour in the least. On examination per vaginam, the os uteri was found hard, firm and closed, and appeared to be cicatrized for a considerable distance around, nothing pressed immediately on it, but towards the left side, a substance resembling some part of a foetus was to be felt. After remaining over night and no alteration taking place, I gave her an opiate, and bled her. She now became easy and soon recovered so as to be able to be about the house. The abdomen subsided considerably under the uterine discharges, and this gave rise to a suspicion she was not pregnant. On the 18th of October, I was again called to

her in labour and remained until the 21st. I found the parts as before, her pains were extremely severe, and the motion of the child distinctly felt by myself and bystanders. After fruitless efforts, I resorted to opiates again, when she became easy and continued as before. I saw her daily for some time, she was as comfortable as usual. I was called to her again the 14th of November in labour. The advice of a neighbouring physician was requested. Her pains gradually wore off, and by the use of opiates she went on as usual.

On the 14th of December, I was again called to her in labour. A neighbouring physician who now saw her rather favoured the idea that she was not pregnant, and suspected that there might be something growing in the uterus.—Her pains were very excruciating. I made some effort to dilate the os uteri, by introducing my hand into the vagina and pressing with the finger, but without effect. The warm bath, anodynes, &c. had been premised. This turn passed off as before, on the 12th of January, 1818, I visited her again with another neighbouring physician. She was again in labour, she had now some evacuation of an aqueous fluid from the vagina.—We made examinations and with some effort I introduced a probe as large as a catheter, into the uterus, and could not perceive any substance within, but a large substance immediately in contact with the uterus. The irritation of the instrument brought on violent pains, but to no purpose. She recovered as before. I was again called to her in labour on the 29th of January, and 10th of February, at the latter period, some ulceration had taken place near the os uteri, and a small quantity of purulent matter was evacuated. Nothing more occurred than in her previous terms. I saw her frequently for several days, and on the 27th of February, was again called to her in labour. I found her as usual. I visited her on the 3d and 5th of March, still with labour pains, which gradually subsided; and she remained in extreme debility, with an ulcerous discharge from the vagina, for sometime voiding large quantities of purulent matter. This continued until July, when there was considerable irritation and discharge of bloody matter by stool, followed in a few days by some pieces of bones of a fœtus; this put an end to all doubts and established the fact, in the minds of the inquisitive vulgar, which had been well grounded in my opinion, for an year and a half. Those bones continued discharging until the last of September, 1818, when there had come away, and in my possession, one hundred and thirty-five pieces. Probably a number were evacuated which were not found.

In this case there was something more extraordinary than any thing I have seen published, on extra uterine conception, viz. the bones were firm and sound, and discovered but little appearance of absorption, yet the long bones as well as the bones of the cranium, ribs, &c. were broken in pieces of one, two, or three inches in length. This fracturing of the bones I am not able to account for in any other way than by the force of the parts inclosing them, at those times when she was severely in labour. The bones were all discharged per rectum, with but little assistance excepting one clavicle, which passed per vaginam. Mrs. Bickford has acquired the habit of using a large quantity of opium, yet with the use of this anodyne and some debility, and dyspeptic symptoms, she enjoys a considerable share of health, so as to be able to perform her usual labour. I am well aware, that my practice in the above case, would not be proper in common cases. I had no precedent directly applicable. The woman was in terrible distress, almost in the horrors of despair. The cæsarian section did not appear to me warrantable. To be an idle spectator was painful, I therefore resorted to some of the above practice, partly with a faint hope to relieve the patient, and partly for my own satisfaction and those who accompanied me. The above minutes, although so imperfect, were taken at the time, and as correctly as my judgment served me.

Unity, (N. H.) April 21, 1819.

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*Extracts from a Letter to one of the Editors, on the beneficial effects of Electricity in Tonic and Clonic spasm, and in scrophulous affections. By SAMUEL MANNING M.D.*

[Communicated for the New-England Journal of Medicine and Surgery.]

**I**N September, 1812, I was called to visit S. L. aged 18 months. I found her in a very distressed situation, with a contraction of the upper and lower extremities, and an inclination of the head to the right shoulder. The history of the case, previous to my seeing it, as given me by the parents, is as follows. When about eleven months old, they first discovered an aversion in the child to stand or walk as usual, and on examination, found the left leg to be contracted and very painful when an attempt was made to extend it. Sur-

gical advice was immediately resorted to. The case was pronounced to be an affection of the knee joint, produced by an external injury, although there was no enlargement, or unusual heat of the part. Warm poultices were ordered to be applied, which were continued a fortnight, without producing any good effect. A stimulant ointment was substituted for the poultices, which afforded as little relief; the contraction increasing. The right leg was now discovered to be affected in the same manner as the left. A medical consultation was had on the case, the result of which was, evacuating the patient frequently and freely, and the more free use of the ointment. Under this course, the left arm first became affected, then the right, with an inclination of the hand to the right shoulder. Further advice was now resorted to. The evacuating plan was abandoned and a tonic course adopted and pursued for a considerable length of time, with apparently no better success than either of the former courses. At this stage of the disease, seven months after its commencement, I was called to visit the patient. I found the lower extremities so contracted that the heels nearly came in contact with the nates; the arms so stiff that the hands could not be passed to the mouth; coldness of the extremities, restless nights, and a great aversion to being moved, which appeared to produce pain. I advised to the use of electricity, if it should meet the approbation of the attending physicians, who were absent. The advice was communicated to them. They entirely disapproved the use of it, expressing fears that the life of the patient might be endangered by it. The medical course they had been pursuing, was continued till the middle of winter, when nature was abandoned to her own exertions, till April 12th, 1813, I was then again requested to visit the child and apply electricity, if I still thought there would be no danger in using it and the least prospect of its affording any relief to the child. At this time I found it quite emaciated. I commenced with passing from 50 to 80 light shocks from the head to the feet, and cross wise from the hands to the feet, which produced a general warmth and moisture over the whole surface of the body. The child from this time enjoyed quiet nights, which had not been the case from the commencement of the disease. I continued electricity daily for two months, the patients general health improving and the contraction having in some degree abated. From some cause I omitted electerizing her for several weeks, during which time she remained stationary. The father of the child called on me again and requested me to continue electricity, being

satisfied the child had been very much benefitted by it. I again applied it and continued it till fall, not however so frequently as before, when the child could raise itself and stand by a chair, and by February, was perfectly restored to health and the free use of all its limbs. She remains perfectly well to this day, having experienced no return of the complaint, being solely indebted to electricity for her restoration.

A. W., aged about 22 years, after being reduced very low by long continued sickness, was attacked by emprosthotonus and opisthotonus, which terminated in trismus, at which time I visited her in consultation. After applying the usual remedies for several hours, without affording any relief, I advised to the use of electricity, which was opposed by some of the friends of the patient, who thought her to be just expiring, and that electricity would render her last moments more distressing. While the friends were consulting on the propriety of using this remedy, I passed two or three shocks through the jaws. The relief was instantaneous, and to the great astonishment of all present, she was again able to take nourishment, and converse with them. By proper remedies she soon recovered her usual health. About a month after her recovery, I was again called to her, having by over exertion brought back her spasmotic affections. Electricity was again resorted to, and with the same success as before. A year after this I was requested to visit her in an adjoining town, labouring under the same distressing symptoms, having lain three days with her jaws so firmly closed that she had not been able to take the least particle of nourishment, the attending physician having in vain attempted to relieve her by the usual means. By passing a few light shocks through her jaws, they were immediately relaxed and she was again able to use them. I was twice called to her within the following year, having both times, lain four days with her jaws closed, and unable, during the whole time, to take any thing. Electricity never failed to afford immediate relief.

In 1815, I visited R. T., a young lady labouring under severe clonic spasm, requiring three or four persons constantly to attend her, to prevent her injuring herself. I applied electricity, passing the shocks from the head to the feet, which immediately relieved her. I continued electricity several days, applying it whenever the spasms threatened her, during which time I evacuated her freely. She was confined about ten days, when she was able to return to her usual employment.

L. O., aged 20 years, applied to me in 1815, with a tumour of the size of a hens egg near the angle of the left jaw, and a very great enlargement of the thyroid gland. The complaint commenced about three years before. She had been attended by Drs. —— two years of the time, without experiencing any relief from any remedy they had prescribed or administered, the disease gradually increasing. On the application of electricity, she could move the neck with greater ease, and by continuing it a few weeks, passing light shocks through the parts affected, and from the sides of the neck to the feet, the tumours gradually subsided, and in the course of a year, entirely disappeared and have not returned. The patient, living at a distance, could not attend to be electrified oftener than once or twice a week, which was probably the cause of the cure being so long protracted. In one or two other similar cases I have applied electricity as successfully. I believe the principal cause of the failure of electricity, so frequently, has been, from not persevering in the use of it a sufficient length of time.

P.S. You will notice that in every instance I made use of light shocks. Perhaps the cure, in some instance might have been accelerated, had I at the same time, applied it in some other form.

Lancaster, (Mass.) July 1819.

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### *Case of Hydrops Pericardii. By DR. EPHRAIM BUCK.*

[Communicated for the New-England Journal of Medicine and Surgery.]

IN the latter part of the last fall, I was called to visit Miss Nancy Bridge, aged thirty-two. I found her labouring under an apparent inflammation in the left part of the thorax. The respiration was difficult, attended with frequent sighing, slight cough, voice very low and plaintive, pulse frequent and small but regular; complaining of an uneasy fulness about the region of the heart. Appetite poor, bowels constipated, faeces of a colour darker than natural, urine scanty and high coloured, depositing a brick coloured sediment; the catamenia had been obstructed for some years. On inquiry, I found that these symptoms had been coming on for eight or ten years, that they were sometimes more severe than at others, and that she had not been entirely free from them during that time. She informed me that sometime previous to the com-

mencement of these symptoms, she had had a violent attack of what she called lung fever.

I inquired what remedies had been usually applied for the pain in the side, (which was the most troublesome symptom) and was informed that they had been various, and attended with very little success: that blisters sometimes afforded temporary relief. I recommended a blister as near the pained part as convenient, and a gentle cathartic. But they were attended with no permanent advantage. Consultations with two able physicians were held, and various remedies administered, but all to no effect. She continued getting worse, respiration more difficult and uneasy, fulness about the heart increased; she used to say it seemed as if there was something there that would burst. The face and hands were purple, feet and hands uniformly cold. She had frequent fainting fits, during which the purple colour of the face did not subside: she could not endure a horizontal posture, till within a few days of her decease, when she had no choice of position, being equally easy in one as in another. She died on the 29th of March, 1819. Having obtained leave of her friends, an examination of the abdomen and thorax was made, in presence of Drs. Walker, Webster and Gould, and likewise of my students Mr. Buck and Mr. Green.

The abdominal viscera exhibited no unusual appearances of disease. There were about two pints of a transparent fluid diffused among the viscera.

On opening the thorax, there were found contained in the pericardium three and a half pints of fluid resembling in colour and consistence thick chocolate. The whole of the lungs adhered posteriorly to the thorax and to that degree that it was impossible to separate them. They appeared to be about the consistence of the liver. The heart was displaced to the right, it was thought nearly its width.

Malden, (Mass.)

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*Case of Fungus Cerebri successfully treated by excision, together with some remarks on the nature and treatment of Cerebral Tumours. By JONATHAN A. ALLEN, M.D.*

[Communicated for the New-England Journal of Medicine and Surgery.]

**E**VERY thing which has a tendency to elicit truth or establish a medical fact, is interesting to the scientific practitioner. Under this impression I am induced to submit to the public the following case of *Fungus Cerebri*.

Jesse Graves, aged 19 years, of an ordinary constitution, on the 21st of September last, received a wound from the discharge of a musket loaded with powder and wadding, near the posterior and inferior angle of the left parietal bone. The unburnt powder, wadding and hair of his head, together with broken pieces of the skull, were forced into the brain. Some portion of the brain was discharged and the haemorrhage which ensued was considerable. He fell senseless and remained partially comatose for several days.

The extraneous substances were carefully removed. To accomplish this, at each dressing it required attention for several days, on account of the minuteness of most of the foreign substances which were driven into the brain. A dosil of lint spread with simple cerate was laid on the brain in order to preserve a suitable degree of pressure. The head being previously shaved, the lips of the wound were then brought to approximate—but could not be made to co-apte within about two inches, and retained in that situation with strips of adhesive plaster. Strict antiphlogistic treatment was adopted—venesection was several times performed.

His mental faculties gradually returned; the febrile symptoms subsided, and in a few days granulations appeared, having a healthy appearance around the edges of the wound.—From the brain, however, their arose a fungus, and apparently vascular tumour, which increased to such a size that on the first day of October, notwithstanding it had been daily touched with a caustic, it closed the passage through the cranium so as to prevent the discharge of pus from within the skull.

A severe pain of the head ensued which was soon followed with delirium and convulsions. Under these circumstances I determined to remove the tumour by excision. For this purpose I passed a tenaculum through it, and elevated it to such a situation as to enable me to remove it somewhat below the inner surface of the skull. The bleeding at first was considerable but was soon checked by the application of the lunar caustic. All the disagreeable symptoms immediately subsided. The wound was then dressed in the usual manner.

At this time the patient being feeble, he commenced a moderate use of the bark and wine. His health returned rapidly and the wound assumed a healthy appearance. The fungus cerebri caused little or no more trouble. The caustic was repeatedly used and moderate pressure made. Under this mode of treatment in about six weeks from his receiving the injury, he was able to commence a journey of two hundred

miles which he performed without any inconvenience, notwithstanding the wound was not entirely closed. Last winter he wrote "my health is good and the wound almost entirely sound."

Mr. Abernethy is of opinion that extravasated blood pushes out the brain: and Dr. Dorsey mentions two cases he dissected, in which the protrusion appeared to be caused by the pressure of pus. Mr. Charles Bell supposes that Mr. Abernethy's opinion is correct; and yet two other kinds of tumour arise—the one a fungus excrecence from the dura mater—the other a proper organized fungus from the brain—each of these opinions is probably true, and each variety of fungus may require a different mode of treatment.

In the case which is the subject of this communication, the tumour was evidently organized substance originating from the brain, and differing in no respect from fungus excrecesses in other parts of the body except in texture. If the opinion of Dr. Gall be correct, that the brain is a convolution of capillary vessels, fungus flesh may as well be conceived to arise from it, as from other parts of the body. The prevention of fungus formations in most instances is accomplished by a proper degree of pressure in the diseased part, whether it be on the brain or other parts of the system. This implies identity of formation. The propriety of cutting off *fungus cerebri* has been questioned on account of the haemorrhage which often ensues. In such cases does not the haemorrhage arise from a partial removal of the tumour? For the same reason fungus tumours in other parts of the body are frequently found to bleed copiously when partially removed; but when completely, cease entirely. All of a truly organized *fungus cerebri*, if our opinion be correct, should be removed, with caution, however, that none of the healthy brain be included. In confirmation, the case mentioned by Quesnay, as stated by Mr. S. Cooper, in which the patient tore off the tumour himself and recovered, may be cited; and also a case communicated to me by Dr. Spaulding of Montpelier, Vermont, in which he cut off the tumour and his patient recovered. Another opinion which the case of Graves militates against is, that these tumours are luxuriant granulations, caused by general increased excitement. In some instances this may be correct; but the good effect of bark and wine in the case of my patient plainly shows, that increased action could not be the cause of the cerebral tumour.

*Cases and Observations on Hydrocephalus Acutus.* By WILLIAM COOKE, of Great Prescot Street, Member of the London College of Surgeons.

[From the London Medical Repository.]

**N**OTWITHSTANDING the great attention which of late has been directed to this disease, some of the most important *desiderata* for the early diagnosis and successful treatment are yet to be supplied.

Various authors, indeed, have done much towards discriminating it; yet there are cases of frequent occurrence where the characteristics on which their chief reliance is placed do not exist; and Practitioners the most competent to appreciate the diagnostic symptoms of disease, fail in detecting this until it has attained an incurable stage, or until an opportunity of *post mortem* inspection is afforded.

In elucidation of this circumstance I might refer to an interesting case, by Dr. Wm. Heberden, published in the fifth volume of Transactions of the College of Physicians. The patient was an old man, who had been deaf many years. His last illness was fever, expectoration, and transient giddiness.—Some time afterwards, indeed, he had a fit, but soon recovered from it; and he continued tolerably well until within twelve hours of his death.

The dura mater was found strongly adherent to the calvarium; tunica arachnoides thickened; the cellular structure of the pia mater contained about four ounces of fluid, and the ventricles about eight ounces. The internal carotid and basilar arteries were ossified. The abdominal viscera were healthy.

Here was a case of very extensive effusion, with organic disease, unattended by its usual symptoms.

Dr. Abercrombie, in his valuable Paper on Chronic Inflammation of the Brain and Membranes, says, "We have reason to believe that we have no certain mark by which we can ascertain the presence of hydrocephalus; but that all the usual symptoms of it may exist in connexion with a disorder of the brain, which, if allowed to go on, would probably lead to hydrocephalus; but which, if treated with decision in its early stage, holds out a fair prospect of being able to arrest its progress."

Dr. Fothergill attached some importance to the dejections being of a dark greenish colour, with an oiliness or glossy bile:

but both he and Whytt considered the more general symptoms as common to this disease, and other causes of irritation, as worms, dentition, etc.

Dr. Cheyne, indeed, considered the oily-looking, or glazed dark green stools, as peculiar to hydrocephalus, but not constantly attending it: upon this point, however, my experience accords very much with that of Dr. Porter; for I have never seen this appearance of the stools occur until after the administration of calomel, and it has generally ceased to appear when the employment of this medicine has either been suspended or reduced to extremely minute doses. I have not, indeed, observed these peculiarly glossy stools in other cases than hydrocephalus, after the employment of calomel, except on one occasion; and although the youth is now living, I had fears at one period of a protracted indisposition, that he was a subject of water in the head; but this appearance of the stools was never exhibited after other purgatives. Even in small doses, his constitution was uniformly much disordered by calomel, which more particularly affected the hepatic secretion, suspended digestion, and gave to the undigested aliment, passed as excrement, the resemblance of boiled spinach, with an oily surface.

Dr. Coindet has directed attention to a particular aspect of the urine; especially to a micaceous deposition like crystals of boracic acid, and which he believes to be uré. This appearance, he says, is almost peculiar to hydrocephalus, and takes place in the second stage.

I have not had an opportunity to appreciate this observation; and although it would be uncandid to prejudge it, many doubts will arise as to the safety of relying for pathognomonic symptoms upon the adventitious appearance of a secretion so liable as urine to be modified by a variety of combinations.\*

Diverse opinions have likewise been entertained respecting the origin of the disease. Many able writers have contended that it generally originates in organs remote from the brain, especially the chylopoietic viscera. Dr. Yeats seems to have been pretty generally understood to maintain almost exclusively the remote origin, but he has recently declared his sentiments more explicitly on this topic. "I beg to repeat," says he, "that I by no means intend to deny that a diseased

\* May not this "micaceous deposition" be the same as the "branny sediment" so frequently mentioned by Dr. Blackall, in his cases of dropsy, not only in the head, but in other parts of the body.

action does occur not unfrequently in the brain, *per se*, independent of previous disease in any other organ."

On the other hand it has been maintained, that the disease very frequently exists in the head, without being attended with any very manifest derangement of the abdominal viscera, and without any trace of disease being discoverable in those organs after death. Dr. Spurzheim, whose opportunities of inquiry must have been extremely numerous, admits that often the first disorders take place in the abdomen, and the greater determination of blood to the head is the result.— "Yet (says he) anatomical dissections have convinced me that in the greater number of cases, the morbid appearances of the abdomen are secondary symptoms of the affection of the head."

To rely upon the non-discovery of organic lesion in remote organs, after death, would certainly be extremely equivocal; and inconsistent with pathology.

Diseased action may exist without a change of structure; yet it does unquestionably induce it. Whether that morbid action be primary or sympathetic, in most cases it will produce a change in the organization of the affected part: and, therefore, although not so universal as to justify the inference that all disease must be discernible after death; yet it is perfectly accordant with pathological phenomena to expect some change in structure, when the functions of those parts on which structure itself depends, have long been deranged.

Dr. Yeats has referred to the retrocession of rheumatism to the heart, of gout to the stomach, and of erysipelas to the brain: "no mark," says he, "of these diseases shall appear after retrocession, although sufficiently apparent and severe before it, when the brain, the heart, and the stomach, shall be found diseased upon dissection, but shall have exhibited no symptom of disease, until such retrocession took place."— Cherishing a high degree of respect for the talents of this distinguished Physician and author, it is with considerable deference I submit that nothing could be less conclusive than this reasoning, as it merely shows that certain parts, previously diseased, had regained a healthy state prior to death, and the circumstances are not parallel with those phenomena they were intended to explain.

So far as my experience and inquiry have enabled me to form a judgment, I should regard hydrocephalus a disease of the head, as independent as most other diseases; liable to arise from circumstances exterior to the body, as well as from

derangement in the functions of some other organ, by which the balance of circulation throughout the body might be disturbed; and exciting, like most affections of the head, very considerable sympathetic influence over the digestive functions, especially those of the stomach and liver.

Individual cases of disease have been so multiplied, and the phenomena of *this* disease so long investigated by the analytic process, that it seems specious enough now to demand attention to the synthetic, to the combination of the accumulated facts, and to a deduction from them of principles to direct the treatment;—to the discovery of some more efficient method than is at present known of averting the catastrophe in which it generally issues. Plausible, however, as some Practitioners render this sentiment, and truly important as it is, we cannot admit that the period has yet arrived when we may sit down and quietly contemplate the past, and cease to pursue individual inquiries for the future. So much obscurity still envelopes anatomical and physiological science, and so tributary have zealous pursuits of morbid anatomy proved, to elucidate disease, and to impart efficiency to curative indications, that I persuade myself every individual case of disease, in which the interposition of medicine has been effectual; every fatal case, in which inspection of the body after death shall have been subservient to the illustration of preceding symptoms, and especially an aggregation of such cases, will never cease to be acceptable to this society.\*

I shall then proceed to detail four case of this formidable disease, affixing to each the result of careful inspection after death, and shall presume, in the sequel, to make such observations on the treatment, as these and a variety of other cases have appeared to justify; in hope of eliciting much useful information from gentlemen of more extended experience and

\* This Paper, with others by Dr. Robinson and Lewis Leese, Esq. was presented, and partially read, at the first meeting for medical discussion, of the Hunterian Society, held on the 21st of April last. The institution of this society has been already announced through the medium of the MEDICAL REPOSITORY, and other periodical journals. It originated in local objects, but it embraces the cultivation of medical and physical science in general. It therefore identifies with it Practitioners in every part of this country or abroad, as corresponding members, from whom a quarterly communication, but no fees, are required. Whilst its laws protect it from the admission of unworthy candidates, the terms of admission to respectable men are made peculiarly easy. The continued accession of distinguished Practitioners, in each department of the Profession, renders its commencement auspicious.

accurate observation, many such being enrolled in this society.

The cases are not adduced to establish any favourite system or opinion; they rather tend to show that the designatory phenomenon of water in the head exists under the greatest diversity of combination and symptom; and that sometimes the fluid exists without having manifested itself by any cognizable sign; whilst at others (although such cases never fell under my inspection) the ordinary symptoms of it occur, without the fact which those symptoms usually represent; and which seems to justify the inference that water in the head is but a consequence of other disease in that organ, and that the state of the patient would not be amended where the fluid absorbed without that state being altered in which the effusion originated.\*

Notwithstanding the successful achievements of some comparatively recent physiologists, by which the progress of medical science has been surprisingly accelerated, yet there are many phenomena in disease so involved in obscurity, that the treatment is still conjectural. The interest of humanity, as well as the honour of the Profession, present most powerful incentives to the utmost diligence and perseverance in those investigations which have been found most effectual in developing the nature of diseases to which the body is incident. The progress of science may be imperceptible, and the agents in it subordinate; yet as it is by a careful collection of facts, and a deduction of legitimate inferences from them, that advancement is most likely to be insured, I shall not hesitate to communicate (though it be with diffidence) those principles which my own experience and observation have suggested respecting hydrocephalus. Whilst, then, I maintain, that although often co-existent with disease in remote organs, it seldom originates from them, I cannot cherish the opinion which many highly respectable Practitioners have adopted, that it is inflammation, either of the membranes of the brain, of the brain itself, or of the delicate investing membrane of the ventricles.

Sometimes the symptoms at the onset are so acute, as to conceal the real points of distinction betwixt hydrocephalus and phrenitis. The progress will generally exhibit discriminating characters; and the morbid appearances after death seem to me decidedly unlike those presented after inflamma-

\* The cases are omitted. Ed. N. E. Jour.

tion in the membranes of the brain. The tunica arachnoides, indeed, is often rendered opaque; but the increased vascularity of the pia mater consists chiefly in venous congestion; and the dura mater has been but slightly or not at all affected in the cases I have examined; whilst it must be conceded, that as in many diseases in which inflammation, though not the chief agent, is accessory, so there are cases of hydrocephalus in which high arterial excitement is a very prominent feature.

If we suppose an inflammatory condition of the membrane of the ventricles to constitute the cause of the disease, I am apprehensive we shall be unable to account for all the phenomena which happen too frequently to be considered merely fortuitous, and from the peculiar structure of the brain, it is probable they exist more frequently than is discoverable.

The dull and clouded, or more distinctly vascular aspect of this membrane is not constant, and, so far as I have observed, the choroid plexuses (from which, as well as the membrane, secretion is supposed to take place) are generally paler than natural.

We cannot by it account for effusion between the tunica arachnoides and pia mater, except, indeed, by admitting that the membrane of the ventricles is a continuation of the arachnoid coat, which has been rendered extremely probable; in that case, however, the disease should be designated inflammation of the tunica arachnoides. Neither can we explain the frequent occurrence of abscesses in the substance of the brain, nor changes in the texture itself, where the nature of the change may be scarcely appreciable. The characters of the fluid itself likewise differ considerably, in general, from the fluids of other inflamed serous membranes. It is generally limpid, as pure water, and is believed to approximate the natural state more than any other morbid effusion.

Of those cases in which there appeared unequivocal symptoms of hydrocephalus, but in which no effusion was found after death, no instances have occurred to me; they are so well authenticated, however, that I cannot doubt their occasional existence, but apprehend that a state of inflammation of this membrane would by no means induce that series of symptoms which are usually supposed to denote this disease.

Is the disease then an inflammatory condition of the substance of the brain? The frequent formation of abscess; the deposition of lymph; the manifestly increased vascularity in most cases, concur, with the acuteness of the symptoms, to indicate an inflammatory state of the cerebral structure; but a

variety of cases immediately present themselves to our view in which there was no other prominent feature than a softened and apparently disorganized condition of some part of the brain, quite distinct from that ensuing after death, as was seen in No. 4, of the preceding cases, from which we must infer that inflammation does not constitute an essential cause or quality of the disease.

I am rather disposed to consider it a peculiar organic disease of the whole brain, affecting the substance and membranes in common, generally attended with a sub-acute form of arterial excitement, but more conspicuously, with some obstruction to the return of blood from the head, inducing the state of venous congestion. Of this condition effusion is a very common, but not inevitable consequence. From the variable state of vascular excitement, the distinctions into more and less acute forms have arisen; but this symptom often affords very inconclusive evidence of the state of the affected organ, probably deriving some modification from the peculiar connexion of the brain and nervous system with the heart and arteries, which, hitherto, it may not have been practicable to develop.

What the real nature of this disease is, I am not prepared to exhibit, but think it presents many points of analogy with scrofula. Their alliance derives some confirmation from the frequently hereditary nature of hydrocephalus, its frequent co-existence with other scrofulous diseases, and from the greater liability of children to it, in whom there is a remarkably early or energetic development of the intellectual faculties, which, if I do not mistake, is often the case in youths predisposed to true phthisis pulmonalis.

That a tendency to the disease may often be counteracted, I have not the smallest doubt; and that in certain states of the disease itself, medical agency may be interposed with effect, there are cases enough to justify an expectation. If, indeed, the disease consisted merely of inflammation, and we had only to subdue this, and afterwards to promote absorption, the treatment would be greatly simplified: but, believing that it is more complicated than this, our reliance must, I conceive, be placed on plans adopted anterior to that period at which we have been accustomed to view it; at which perhaps only presumptive evidence may exist of the disease having really commenced, or of its being imminently threatened.

Parents are often extremely culpable in disregarding the inactive forms of juvenile complaints; but even in the present

highly cultivated state of medical science, the most sagacious Practitioners will often fail to prognosticate formidable diseases, to which early and perhaps slight derangements of function often tend, and which, at that period, might have been averted.

In a large proportion of cases of hydrocephalus, the commencement and early progress are extremely insidious; the departure from health appearing to consist merely in torpor or irregularity of the digestive or excretive function, or slight deterioration of temper or disposition, no anxiety is created. Too much solicitude, however, never can be exercised in the most trivial chronic disease, to which children especially are liable, and an increase of fretfulness (and, indeed, sometimes of vivacity,) should be considered as truly symptomatic of disease, as any character which the functions of the body can present, and as legitimately to claim the interposition of medical, as well as moral treatment. The wanton infliction of corporeal punishment under these circumstances, cannot be too strongly reprobated.

A disposition to the disease may often be known by the circumstance that other children in the family have been affected; and in some instances not only have parents been able from personal resemblance to select the individuals most liable to be invaded, but likewise to predict the time about which the attack shall take place.

There are states of constitution in which a morbid diathesis seems to prevail, rendering the individual peculiarly susceptible of the influence of adventitious circumstances, and yet no particular disease shall be apparent until the application of some local excitement. Many such children are delicate almost from birth; and as they pass through the years of childhood, often appear particularly amiable, and have an unusual aptitude in the acquisition of elementary knowledge.—These pleasing qualities may not only be admired, but fostered; and under inordinate anxiety to cultivate the mind, morbid actions have been cherished in the brain; whilst the functions of other organs, essential both to health and life, have been disregarded.

Whether the earliest morbid changes connected with hydrocephalus take place in that texture of the brain in immediate relation with the nervous system or not, we find, at a very early period, that the functions of the digestive organs are disordered; and if any secretions are peculiarly subject to nervous influence, those of the abdominal viscera must be distinguished.

The unnatural appearance of the stools, or the irregularity of the excretion, may be the first token of disease which distinctly arrests the observation of parents; and if domestic remedies are unavailing, medical advice may be solicited, and the Practitioner's attention almost exclusively directed to this point.

The great influence which derangements in these organs exert upon the general health, and the surprising efficacy of remedies tending to induce salutary actions in them, in curing many diseases of distant organs, will plead strongly in extenuation of an occasional error in considering their derangements as primary, when they may be consecutive.

Whatever benefits may be derived from calomel and scammony, and other stimulating and exciting purgatives in certain diseases of these organs, I am persuaded, in that to which we are now adverting, they often do essential mischief; and that the organic affections of the liver, enlargement of the mesenteric glands, affection of the mucous membrane of the intestines, and the intus-susceptions, are often occasioned by them.

Where there is suspended hepatic secretion, it seems extremely rational to administer mercurial remedies. If calomel be adopted in these chronic cases, an eighth of a grain, steadily employed, will render more service than a larger quantity; yet I think an unirritating dose of the blue pill, or of the hydrargyrus cum creta, far preferable. In many instances, however, in which persevering employment of the most varied and guarded mercurial treatment did not avail, the secretion was established by a steady adoption of some mild aperient. In counteracting a disposition to hydrocephalus, there is much to be avoided, as well as much to be done; the mind should be cultivated very cautiously, and efforts of memory must be relinquished, whilst encouragement is given to active amusement. The diet must be nutritive and unstimulating. As an aperient, a few grains of the sulphate of magnesia are very suitable. Mineral acid, I think, is often useful; either the nitric, or, as I have recently employed it (but whether entitled to preference, I am not quite satisfied,) the nitric and muriatic in combination. On one occasion, where the symptoms were very threatening, I successfully employed this acid with the extract of taraxacum, keeping the bowels gently open with the Epsom salt, and enjoining residence in the country.

Had I not already greatly exceeded the extent which propriety suggests in this essay, I should have considered the

evils arising from an indiscriminate administration of calomel and stimulating purgatives worthy of much further consideration, and might have corroborated my opinion by a diversity of cases, illustrative of the morbid actions which these drugs induce and keep up ; and of the greater efficacy of mild aperients in exciting hepatic secretion in some conditions of the liver in relation to other organs ; and I might have corroborated my sentiments by reference to Practitioners, whose long experience and accurate observation entitle them to the highest respect. I shall only cite the opinion of Dr. Blackall upon the former particular, who, I recollect, in speaking of a child to whom calomel had been improperly administered, described the stools as black and liquid, "such as are not only brought off by mercury, but often entirely caused by it."

Nevertheless, I am persuaded that mercurial remedies in chronic indispositions, and even in forms threatening hydrocephalus, cannot be wholly abandoned. An unirritating dose of a mild mercurial preparation, repeated every other or third night, during a week or ten days, will often prove of signal utility ; and although calomel does not appear equally adapted with other preparations of mercury, to the purpose in view, it is an agent of great efficacy under some other circumstances of morbid action.

As to the treatment of the disease itself, much must be determined by accidental combinations.

When the disease assumes a very active form, blood-letting is indispensable, but must not be carried to an extent equal to that which inflammation of the brain demands, and which even the strength of arterial action and appearance of the blood seem to justify. Wherever bleeding had been carried to a large extent, although it temporarily improved the patient's condition, unfolded reason, or removed some degree of coma, yet a proportionately larger quantity of fluid was effused. The case of Mr. Hill is interesting in this respect. Had the disease consisted of inflammation, he, in all probability, would have recovered; but as haemorrhage continued to recur, the quantity of fluid appeared to increase. I therefore prefer the abstraction of blood by leeches, in cases of children ; and three or four ounces taken from adults will often subdue arterial excitement, in a degree equivalent to a much larger quantity, in cases of inflammation.

As morbid actions are often created or kept up in the brain by unnatural secretion or accumulation in the intestines, it is not incompatible with the preceding observations on calomel and stimulating purgatives, to recommend the administration

of a dose, in the first instance, adequate to their removal; and so speedy an amendment of cerebral functions occasionally results, that we admit the derangement was but sympathetic. To other sources of irritation attention must be directed, especially dentition.

During the state of greatest excitement, cold applications to the head are often useful. To apply them efficiently the head should be shaved, or the hair cut off very closely.

In phrenitis, and other cases of determination to the head, these evaporating lotions ought to supersede blisters to the head; but in hydrocephalus, early and extensive vesication upon the scalp seems highly expedient.

The medical treatment which has been most useful in my practice, has consisted of a combination of mercurial pill (in a very minute dose,) with antimony and digitalis, keeping the bowels gently open by a neutral aperient salt. Under such management as this, modified a little by circumstances, cases which seemed to be incipient forms of this disease have recovered; but from the uncertainty of the diagnosis, I am fully sensible how equivocal these instances must appear.— Had I not already obtruded too much on the time of the Society, and encroached rather too greatly on duties claiming my attention, I should have candidly submitted some of them to the judgment of my hearers.

Under every form of management great disappointments will arise. There is no disease, however, which excites more commiseration towards parents and their offspring than this; nor any that creates more solicitude, or prompts to greater efforts in order to avert a fatal termination. Discouraged, and almost despairing, as we at times may feel, the extent of injury which the brain will sometimes endure, and of reparation it will occasionally effect, should animate us to unceasing researches into the cause, the progress, and consequences of this formidable malady, or rather into the origin of that train of morbid actions, and the change of texture they endure, upon the elucidation of which, correct principles, which impart efficiency to practice, can alone be securely established.

I am quite aware how unsatisfactory and incongruous this essay is likely to appear. It has been written amidst ceaseless interruptions; whilst it has embraced topics which claim extended discussions, its specific object circumscribed me with reference to time and matter. If, however, in its present imperfect form, any benefit should accrue, either from the diffusion of my own experience, or by eliciting the expe-

rience and opinions of others, or should my professional brethren afford me the privilege of uniting with them in their examinations of morbid structure, in this or other diseases, I shall be most amply compensated.

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*History of the Epidemic Fever, as it appeared in a Country Parish in the North of Scotland.* By WILLIAM GOURLAY, Surgeon, Lentrathen, Forfarshire.

[From the Edinburgh Medical and Surgical Journal.]

DURING the early summer months of the current year, a fever of the continued type, bearing the symptoms of the prevailing epidemic, (presently denominated typhus,) began to extend itself to an alarming degree among the different orders of a manufacturing village, about seven miles from this place, with which the inhabitants of this parish had weekly communication on the market days. Its first subjects were the young and plethoric; and, from its running through whole families, it was readily considered as of an infectious nature; yet no case appeared at Lentrathen till the end of August. The first was a stout young man, a miller, who attributed his illness to exposure to cold, when under profuse perspiration; for which, of his own accord, he had taken an emetic, and some purgative medicine, with much relief. Accounting it a sporadic case of simple fever, of a very mild nature, (the heat of the surface being inconsiderable, and no very pressing symptoms present,) I contented myself with the abstraction of a few ounces of blood, which shewed no appearance of existing inflammation, and trusted his cure to repeated doses of calomel and jalap, with the occasional help of dia-phoretics. His recovery was protracted, his spirits depressed, and he relapsed after being up and going about. Before this time, however, I was better acquainted with the nature of the disease; and, as he complained of slight headache, with some difficulty in breathing, regardless of the relapse, I abstracted twelve ounces of blood, with the most manifest advantage; for, in four days after being bled, he was able to attend his employment, even to carry a boll of barley to his mill, and now acknowledges himself in better health than he has enjoyed for years. On the same day that this miller was attacked with fever, a young boy in the next house was taken ill with headache, pain in the back and bowels, with a slight

degree of purging. He quickly recovered, under the use of small doses of calomel, antimonial, powder, and opiate confection, given at bed-time in the form of pill, with infusion of senna on the following morning; the tepid bath occasionally. No other cases occurred till the end of September, when, in the space of a few days, seven young women, residing in opposite parts of the parish, were attacked with symptoms of fever very similar in each. Four were suddenly seized with pain in the bowels, attended by purging; the others were less violent in their nature. The abdominal complaint soon went off, and the headache and pain in the loins instantly supervened.

From the suddenness of the attack, and the previous healthy and plethoric state of my patients, it immediately occurred to me that the fever I had to contend with was of an inflammatory nature, and my resolutions were formed accordingly. Since that time to the present, I have seen upwards of forty cases of the fever in this parish, all of whom have recovered, some very quickly, others more tardily, which last I can trace to visceral disease, of long standing.

The contagious or non-contagious nature of the fever, as it appeared in this neighbourhood, would easily admit of dispute. The two first cases may be readily accounted sporadic, yet it did not leave the small hamlet where it first appeared, till fourteen persons were affected by it. There are instances of its attacking only one in large families of young people, and there are even instances of young women sleeping with the sick (against my positive injunctions) during their illness and convalescence, and continuing in perfect health; and it may not be unworthy of observation, that during the month of October, when the disease was most common at Lentrathen, the immediately adjoining parishes were perfectly free from it; thus verifying your remark, "that fever often seems to arise independently of all communication with the diseased, and that the most intimate connexion is often unproductive of any bad consequence." (Edin. Med. and Surg. Jour. No. 56. p. 537.) There are a few families in which four and five of their members were attacked in succession, but I met with none where all suffered by it. Young, healthy, and unmarried females seemed most obnoxious to its influence, and girls in preference to boys. The married and aged seemed to partake of an immunity; the oldest patient I saw was a woman of thirty-five years.

In the months of September and October, the wind was constantly veering from the S.W. to S., S. E. and E., not

twenty-four hours passing without rain, most commonly in the night time. The weather was unseasonably warm, even sometimes sultry, and the showers were much like those which follow thunder storms. If this state of the atmosphere was no exciting cause of fever, it certainly prevented a speedy convalescence and recovery. For the two preceding years, the fuel, which is chiefly peat and turf, was taken home in very bad order, owing to the early and unseasonable rains; and the poor, from want of employment, were no doubt scantily fed. This last observation does not, however, apply to most of the cases I attended, for the servants of the small farmers in this part of the country generally live at their masters' table, or with very little variation in the quality of their food.

I was sometimes led to suppose, that the past unusually warm and dry summer might be a strong exciting cause, operating upon the predisposing causes of the antecedent cold and wet seasons; and accounted for its frequency among females, to their not being exposed to out-door labour so much as the men, till, in the hard working time of the harvest months, during which the fever made its appearance. But this would by no means apply in general. Be the causes what they may, I should have no hesitation in believing that the fever, which, in the course of two months, affected forty persons in this parish, was a branch of the national epidemic, which is continuing to extend its influence to the north of this island; and I am induced to send you this imperfect sketch of its appearance in a country parish, as its progress to fatality seemed to be effectually retarded by the prompt depletion you have often recommended in your excellent periodical publication; and as my mite of additional proof that fevers of British origin admit, nay, even require, depletion, to an extent not thought of some years ago.

The most constant, and the most urgent symptom, was pain in the head, generally about the fontanelle, or in the forehead, between the eyes; seldom in the occiput. This affection of the head was sometimes preceded by giddiness, and dimness of vision. In those most suddenly attacked, it began with instantaneous pain in the belly, in some cases followed by purging. The pain of the abdomen generally went off in the course of ten or fifteen minutes, when the head and loins became affected, and continued so till relieved by bleeding.—Prostration of strength was immediate, and very great, some falling down at their work in-doors. In a few, the fever was ushered in with frequent fits of delirium, and slight convul-

sions. In one case, this tendency was so great, that the patient could not lift her head from the pillow, without syncope coming on, and she fainted three times before I could open a vein; for I was determined to bleed her in a sitting posture. Immediately on the blood flowing, she grew cheerful, and expressed herself as freed of sickness, and relieved from a great weight which lay upon her heart. She bore the abstraction of sixteen ounces, and then fainted. This I attributed to the loss of blood, and tied up her arm, but bled her to the same extent four days successively. She recovered quickly, but at no period did her blood show the least appearance of inflammation. The eye was suffused in some, the vessels turgid; in most, it was glossy and watering, with a slight degree of intolerance of light. In one case only, there was a little deafness in the beginning of the complaint, but an intolerance of noise in all, with a sensation of beating, rushing, or ringing, between the ears. I did not observe the carotid arteries over-powerful, except in one instance, where the determination to the head was very considerable, more like a case of phrenitis than continued fever; and, had it not occurred at this period, when the fever was so prevalent, I should have perhaps considered it as such. There was always, in some period of the disease, a sense of congestion in the portal circle, which they expressed by saying, they felt, as it were, a great load on their heart, or something holding their breath, and pointed to the epigastric and hypochondriac regions. All had some difficulty of breathing; could not make a deep inspiration without pain, either in the right or left side, most frequently in the left, about the situation of the heart or spleen. The breathing was quick, interrupted by sighing. One only of my patients distinctly pointed out the situation of the liver, as the part particularly painful, (although I had too good reason to believe it was very sensibly affected in all;) he complained of pain in the top of the right shoulder, had no cough, and could not lie on the affected side. None had any cough, but several had a slight degree of sore throat. In a few there was a little irritability of the stomach, rejecting medicine given without opium. There was dryness, and an unpleasant taste in the mouth, but the thirst was never urgent, at least not what might have been expected in a fever requiring full depletion. The tongue was commonly whitish: in some very clean; in others, red at the edges, white in the middle, and foul at the root. A good many had a foul, clammy spit; and, in one case, there was a slight degree of salivation, previously to

taking any medicine. In one family, the fever announced itself by pain and swelling of the inguinal glands, pains in the legs, thighs, and shoulders, and, after the head became affected, the muscles of the superior eyelids were not under the control of the will ; the eyes were closed, and continued so till after bleeding, upon which they could open them immediately, and vision was distinct ; the pupil dilated ; nor did I notice any preternatural contraction of the pupil in the worst cases. On the commencement of the fever, the urine was scanty and high coloured, voided with some pain. In its progress, it deposited a copious sediment, particularly before convalescence. The evacuations produced by purgatives were uniformly of a bad appearance, and fetid ; greenish and slimy, or clay-coloured and copious. A very small quantity of calomel affected the gums in many, and they always had a speedy recovery. The heat of the surface was but little, and few perspired freely, excepting after syncope from bleeding. I saw only two cases in which the cold affusion would have been justifiable from heat and dryness of the skin. They generally complained of cold, especially in the inferior extremities, as far as the knees, with pain in the toes and in the heels.—The face was sometimes flushed, oftener pale. In no case was there delirium and coma, or confusion of intellect ; for the large bleedings in the outset of the attack seemed, in most instances, to convert the fever into inflammation of some particular viscus. The pulse was never much accelerated, averaging about 98 ; seldom above 100. In the commencement of the disease it was weak, but incompressible ; in many cases scarcely perceptible at the wrist, but to be readily distinguished at the bend of the arm, beating hard. This apparent weakness of the arterial action in the extremities happened in the most inflammatory cases. Only in one (*male*) patient was it full and strong, and the blood did not show any inflammatory covering, but the patient experienced the greatest relief from the evacuation. In another instance, after three bleedings, the pulse became wiry, and then the blood showed much buff. The appearances of the blood were various. In some it was quite natural, when, from the urgency of the symptoms, and the immediate good effects produced by its abstraction, one might have been led to suppose that it would have been cupped and buffy. In almost all, the first bleeding was of this kind ; in the next, the crassamentum large in proportion, and covered with a thin strong membrane of a bluish colour ; in the third, the crassamentum small, cupped, and buffy, and thus remained till the inflamma-

tion was subdued ; corresponding with the remarks made in your Journal by Dr. Barlow, in his pathological observations. The serum in many was dark green and transparent ; in others milky and turbid, with flakes of coagulable lymph lying on it ; in which case the next bleeding generally was buffy.

I could observe no critical days. Those who were most freely bled recovered most quickly. Generally in fourteen days after my first visit, they were able to go about in-doors ; but the moist and close state of the atmosphere, I am of opinion, much retarded their convalescence. The male patients recovered more speedily than the females, and required less abstraction of blood to subdue the tendency to inflammatory diathesis ; and those under twelve years were seldom confined eight days.

The existing prejudices among the lower classes prove the greatest obstacle to the efficient practice of the country surgeon ; and I found it no easy matter to persuade them to the necessity of losing blood for the cure of fever, the old people declaring that they had had many fevers, and in their time no such thing was ever allowed, or thought of ; not even (till lately) a drink of cold water, although, to use their own forcible expressions, “they were *toasted sick for six weeks*, and often confined to bed for months.” Immediately after the doctor’s visit, a consultation of the old women in the neighbourhood is held, each of whom has innumerable nostrums to propose, all equally infallible ; and although they may dispute the superiority of their own individual plans, they invariably and unanimously agree in overruling the directions of the medical attendant, more particularly with regard to the use of cooling beverage, abstinence, and the free admission of air. Many, if not all, of these now vulgar prejudices, may be traced to the opinions of the profession ; for, to this day, we read of supporting the strength of the patient by wines and nourishing diet, when, at the same time, the medical prescriptions are antiphlogistic, and the disease of an inflammatory diathesis. Among the country people, they act exactly on this plan ; the most dainty bits are procured for the sick, because, forsooth they cannot eat the common fare ; and they are desired to force themselves to eat, in order to ward off ensuing weakness. This I found a very serious obstacle to overcome, as I could not make them sensible that the patient’s weakness depended on causes quite the reverse of want of food. But finesse is sometimes very necessary, and I luckily hit upon a method to remove most objections, and at the same time save the credit of the old women’s profes-

sional knowledge, and thereby preserve their good opinion.—How to account for so many cases of fever happening in a country parish, in so short a time, they were entirely at a loss ; and the want of heat of the surface, with the uniformity of severe头痛, inclined them to look upon it as a disease *sui generis*, and nothing less than an uncommon visitation of Providence. I accordingly told some of those who, I knew, would soon spread the report, that the present fever was not of the same nature with those they had formerly witnessed, but was certainly of foreign origin ; that it was, in short, a foreign fever that was spreading amongst them. This completely adjusted all differences of opinion, putting to rest all pretensions to skill on their part, and made them fall in more readily with whatever I might judge proper to direct.\*

At my first visit, I found it necessary to bleed as a matter of course, and the flow of blood was continued till syncope supervened, which, in most, happened upon losing thirty-two ounces. In some less than sixteen produced fainting, and in a few I abstracted forty, and in one, forty-eight ounces, before tying up the arm. I then directed that no fire should be kept in the room where the patient lay ; that the windows should be opened, or the house otherwise well ventilated, according to the state of the weather ; and that no food of any description should be offered, till the patient expressed a wish for some, and then, only a little dry toast, or oaten cake with tea, should be given ; to be plentifully supplied with cold spring water, or boiled water, when cold, and all visitors most certainly excluded, for the benefit of both parties. The first bleeding often caused vomiting, which was always assisted with drinks of tepid water, or infusion of chamomile flowers. To some I ordered an emetic of tartrite of antimony, but to those only who, with much sickness, had a desire to throw up ; for I thought the straining caused by the operation of an emetic, in the early stages of the complaint, increased the determination to the head, which, in all cases, was obviously very great. A dose of calomel and antimonal powder, according to the nature of the case, was administered at bed-time, followed next morning with such a proportion of jalap, or infusion of senna, as would procure free evacuations from the bowels. The aqua acetatis ammoniae was given in the early stages, in the proportion of a tea-spoonful

\* *To the Editor.*—This report was not promulgated from sinister or unworthy motives, but merely to gain the entire management of my patients, for my practice was entirely gratuitous.—W. G.

every three hours, with much advantage. The bleeding was repeated, without regard to the duration of the disease, according as the symptoms of inflammation or congestion seemed to demand it, and varied in quantity to the relief afforded. I seldom tied up the arm till the patients expressed themselves free of headache and difficulty of breathing, and could take a deep inspiration without pain. To most the abstraction of blood operated like a charm. So soon as the vein was opened, the headache gradually went off; some expressing this sense by tracing its removal down the course of the frontal sinus to the nose; others as if they felt something creeping down the back; and one patient declared she felt it go gradually down from the occiput, in the direction of the spine, to her thighs and legs, and was finally expelled by going out at the toes. She had no more complaint. They generally bore the after-bleedings better than the first; but I often bled from a large orifice, in order to produce delirium, and consequent reaction. So great was the benefit they experienced from this evacuation, that at every visit, if they had the least headache, or oppression in breathing, they requested me to take away more blood, if I should think fit, and I always found it produce the same good effect. To remove the pain of the back was more difficult; two or three bleedings seldom made any impression on it; and I was often at a loss to account for its obstinacy in resisting large depletion, which produced such marked advantage on the other symptoms. I am, however, much inclined to believe, that the pain of the back, so constantly attending febrile disease, is a good deal owing to portal congestion, as, in some cases, severe pain in the loins, accompanied by a very distressing sense of fulness and weight in the epigastric and hypochondriac regions, was completely removed by the sudden abstraction of thirty-two ounces of blood. During the exhibition of purgatives, the aq. acet. ammon. and the use of the lancet, I always ordered the constant application of cloths, dipped in cold vinegar and water, to the forehead and temples, and likewise blistered the nape of the neck with great auxiliary benefit. The feet were often bathed in lukewarm water, or wrapped round with flannel wrung dry out of warm water, and the patients always expressed relief from that means, especially in those cases in which the feet and legs were inclined to be preternaturally cold. From those under twelve years of age I did not find it necessary to abstract blood. The tepid bath at bed-time, repeated doses of calomel and antimonial powder, an emetic at the beginning of the disease, and

cold applications to the head, together with the aq. ammon. acetatae, were quite sufficient to remove the complaint in a few days. In children, there was often a considerable purging of greenish, slimy, and fetid matters, which I found necessary merely to moderate, but not to check.

From observing the good effects of the digitalis purpurea in incipient inflammation, I was induced to try its effects in some cases of this fever; viz. in those patients where, after large bleedings, there remained slight wandering pains in the head and breast, with difficulty in breathing and compressible pulse; and I am of opinion that it was certainly of use. However, as I could not trust that medicine in the hands of most of my patients, my experience is too limited to offer any thing decided in its favour, but I consider it deserving a better trial, not, however, in prejudice to the abstraction of blood.—I am likewise led to suppose, from the inflammatory tendency exhibited in the symptoms of this fever,—the suffused eye, intolerance of light and noise, excruciating headache, oppression in breathing, &c. &c. that a full bleeding or two from the temporal artery, as practised by Dr. Burnett in the Mediterranean fever, would have possessed very great power in checking its progress, perhaps with less loss of blood; but, from circumstances which it would be needless to mention, and from the uniformity of success by venesection, I did not adopt that plan, which, however, might have been preferable.

From premature exposure to cold, there were a few relapses, but these were easily removed by the abstraction of blood, or an emetic followed by some purgative medicine.—The abstraction of a few ounces of blood, after the patients were up and going about, I always found productive of the most salutary effect in forwarding a speedy convalescence, in those especially who had night sweats about the head and breast. This I would wish to account for in the change of action produced in the constitution. I never found it necessary to give bark, or any medicine whatever, in convalescence, excepting a dose of compound powder of jalap from time to time till perfect recovery.

It may no doubt be observed that the fever, as it appeared in the parish of Lentrathen, an account of which I have attempted to detail, might have been as effectually checked through the judicious administration of purgative medicines. The uniformly unnatural appearance of the feces sufficiently indicated the disordered state of the intestinal secretions, and pointed out the necessity of having recourse to these means;

they were therefore never omitted. But it was not only the removal of the present complaint, but the prevention of disease in a chronic form, that I looked for in full and early depletion. A surgeon in the navy, through the medium of your Journal, remarks that phthisis is not now so common in our fleets as formerly; and this he attributes much to the more free use of the lancet in disease of an inflammatory dia-thesis. And Dr. Barlow, in his excellent pathological observations, writes thus: "We find the effect of acute diseases in relieving the system from nervous affections of long standing, frequently recorded and generally allowed. The explanation has been, that the elements of disease, so long lurking in the habit, were by febrile action elaborated and expelled, and I believe it; but I cannot agree that these elements were of any specific nature, or other than the accumulations of redundant nutriment, and of excrementitious matter undischarged. Partly by the increased actions of the system, which constitute a state of fever, but principally by the evacuations employed to relieve this, these excesses are removed,—the system is relieved from an oppressive load,—its functions are again actively and healthfully performed, and the whole constitution is invigorated and improved." (Edin. Med. and Surg. Jour. Vol. X. p. 366.) But from observing the very sudden good effect arising from the abstraction of a very small quantity of blood, in diseases commonly called nervous, and more particularly on remarking the addition of strength gained by convalescents from this fever immediately after venesection, I am inclined to look upon the time as being too short, in this instance, for allowing the discharge of accumulations of redundant nutriment and excrementitious matters, as the manner of explaining its operation on the system, and rather to suppose that it is from allowing or assisting the change from diseased to a new and healthy action in the constitution, that bleeding proves so necessary and beneficial.—In testimony of which, I beg leave to add the following quotation from Mr. Robertson on Pneumonia, (Edin. Med. and Surg. Journal. Vol. X. p. 195,) which I am sorry I had not seen before my "Hints on Constitutional Disease" were sent off for your consideration: "Venesection thus practised" (i. e. largely in the commencement of acute disease) "produces a very powerful impression, no doubt, on the nervous as well as on the sanguiferous system; and if syncope is superinduced by it, the morbid agitation of the circulation is at least interrupted, and nature has an opportunity, as it were, of beginning anew, and setting on foot a healthy action."

Some years ago, it might have been speciously argued, that the treatment of fever in the robust and plethoric constitutions of the Scottish peasantry could be no rule of practice when prescribing for the same disease as it appears in the habits of sedentary mechanics. It is, however, now sufficiently proved, that the inhabitants of a crowded metropolis, whose systems cannot be supposed to bear a very high degree of excitement with impunity, so far from being debilitated by the loss of blood, acquire additional strength under its abstraction, and demand the free and frequent use of the lancet; Dr. Bateman having most judiciously remarked, that those whose constitutions can support a certain degree of inflammation, can as certainly allow, with advantage, a proportion of depletion adequate for its removal.

## REVIEW.

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*Elements of Pathology and Therapeutics ; being the outlines of a work, intended to ascertain the nature, causes, and most efficacious modes of prevention and cure, of the greater number of the diseases incidental to the human frame ; illustrated by numerous cases and dissections.* By CALEB HILLIER PARRY, M.D. F.R.S. Member of the College of Physicians of London ; Member, and formerly President, of the Royal Medical Society of Edinburgh ; one of the Physicians of the General Hospital at Bath, and Physician to the Casualty Hospital, and puerperal charity, in that City.— Vol. I. *General Pathology.* Bath : Richard Cruttwell, 1815. 8vo. pp. 464.

**D**R. PARRY is among the most distinguished Physicians in Great Britain, and every production of his is entitled to great respect. He is a man of strong natural powers, has enjoyed all the advantages of education which his country affords, and has for many years been in full and respectable practice. He has brought to the work before us a mind matured by age and by philosophical exercises, and rich in professional experience.

We learn from the preface that the author has been for nearly forty years in a situation favourable for the observation of diseases, and of the effects of remedies ; that he has been in the habit of recording such facts as have appeared to him calculated to amend received errors, or to suggest new truths ; that he has been prevented by the “ exigencies of his profession” from publishing his observations ; and that he has daily seen “ announced, as novelties, opinions, which for thirty years have formed the basis of his practice.”

We have noticed these remarks from Dr. Parry, because they will aid us in placing the general character of his book in a clear light. It seldom happens that a set of opinions belong to one individual alone. The “genius of the age,” as it has been called, gives a character to the opinions of all those in-

dividuals who are engaged, at the same time in contemplating the same subject. The doctrines among medical philosophers, who lived half a century ago, have given a colour to the opinions of all who have lived since. Very many physicians have, during that time, regarded the vascular system as the great seat of disease ; but have perceived that the mechanical doctrines in respect to the functions of that system, maintained by many before their time, would not account satisfactorily for the actions of the heart and blood vessels either in health, or in disease. They have then regarded those actions as influenced by the vital powers of the body. Some have considered those powers as resident in the nervous system alone, and as operating only through this system upon the blood vessels.— Others have believed that the vital powers exist in all parts of the body ; as much in the vessels as in the nerves ; and have supposed the sanguiferous system to have its actions modified by agents acting directly, or indirectly, on the powers of that system. By both parties, the phenomena of the vascular system have been especial objects of attention ; and local affections have been thought in most instances to derive their immediate origin from local determinations of blood, sometimes with and sometimes without formal inflammation.— But the observations made on this subject have not been arranged into a system. In the school of Stahl, indeed, this had been done to a certain extent, yet with such a mixture of gratuitous hypothesis as ill-accorded with the more strict philosophy of later times. Now these opinions respecting the very general influence of the vascular system in producing disease are taken up by Dr. Parry, and embodied in a regular theory. As the same opinions have been arising in the same period, and from the same causes in the minds of other men as well as in his, it has happened that he has seen announced as novelties, what had been familiar to his own mind for a long time. Dr. Parry is not peculiar in this respect. We can safely say, that there is scarcely one opinion in his book, which is a novelty to us. Yet we regard the work as very honourable to him, because he has had the energy to bring together and to arrange much, which has been floating in the medical world during our day, and has presented distinct views of objects, which had before been mixed and obscured by others less valuable. Besides, he has dropped many practical observations derived from his own experience, which, if not new, serve to corroborate the observations made by physicians of less weight of character.

It is in vain to attempt to give in a short compass the substance of this book. Some of the leading doctrines will be

stated with a view to some criticisms, which we shall venture to offer. But the whole work should be read by every physician in our country, and for that purpose an edition of it ought to be published here.

"All human science (says Dr. Parry) "is a knowledge of the qualities and order of phænomena." p. 1.

"Of all the deviations from health incidental to the animal frame, the most obvious is a disordered state of the whole, or some part, of the sanguiferous system." p. 4.

In reference to these fundamental propositions, we shall only remark, that a disordered state of the sanguiferous system is not obvious from a first view of the phenomena of disease in more cases, than a disordered state of the sentient system is. Yet, when we trace back the phenomena of disease to their causes, aided by the light of physiology, and by that of morbid anatomy, we do find reason to refer these phenomena in the great majority of cases to a disordered state of the whole, or some part, of the sanguiferous system.

There may be changes in the quantity of blood circulating in the whole system, or in a part of it, and there may be changes in the velocity of the same. As the momentum is made up of the quantity and velocity, a change in either respect will change the momentum of the blood. The more palpable deviations from health are conceived by Dr. Parry, to consist in excess or defect of momentum of the blood, either in the whole system, or in some part. The habits of civilized men tend to produce excessive nutrition, and thus excess in the momentum of the circulating blood, or plethora, is much more common than a defect of the same. Increased momentum of the blood, general, or local, is attended by increased heat. This is true, as regards the external surface at least; but it is not quite clear that heat is always an evidence of increased momentum. Increased redness also attends increased quantity of blood in any part, and the former may be relied on as evidence of the latter in all cases; since there is nothing red in the body except blood. It is only, however, in cases, where the increased quantity of blood is in motion, that the redness is an evidence of increased momentum. The increased volume of a part is, under certain conditions, evidence of increased momentum of blood in that part. Other appearances also are known and admitted as evidences of the same thing. These other appearances are in general increased sensibility and irritability, and derangement of the functions of the part affected.

The derangement of the functions is sometimes accompanied by a peculiar modification of the vascular actions of the part.

The author, having considered the evidences of increased momentum, inquires into the causes of increased or diminished action and fulness in the sanguiferous system. He treats of the structure and powers of the heart and blood vessels, and he attributes the ordinary motion of the blood to the heart, in which we are not disposed to differ from him. He allows to the coats of the vessels powers of motion, and these are the same, which have been pointed out by other modern physiologists, viz.: elasticity and a vital power, to which Bichat gives the name of tonicity. From the exercise of these powers partial affections of the blood vessels may arise, but among the causes, co-operating to produce increased local momentum of the blood, affections of the heart are one, and as he thinks one of the most common. It would give us pleasure to state more fully all his fundamental positions on this subject, but to do so we should be obliged to extract many pages from his book which do not admit of abridgement. In many respects his views are certainly just, but in respect to local determinations of blood, he has not assigned causes which are satisfactory to us. This is a part of the subject not only highly interesting, but one bearing much upon the means of prevention and cure, and therefore highly important. We shall, on this account, venture to offer our own views respecting it.

It is necessary to the functions of the extreme vessels, whether healthy or morbid, that they should receive a constant supply of blood. This serves both as a stimulus to excite them, and as a substance on which they act. The quantity and quality of the blood being the same, the degree and kind of excitement, and the consequent action on the blood, depend on the disposition and powers of those vessels. Thus in the lachrymal gland the secretion of tears, in the parotid the secretion of saliva, and on an ulcerated surface, that of pus, are consequences of the stimulus of the same blood acting on these vessels respectively. Now the different states of the extreme vessels, as to their disposition and powers, do not depend on the heart. It is only the general momentum of the blood which is determined by that organ, and so far as that organ is concerned this momentum will be in certain uniform proportions in every part of the body. But we find these proportions varying under disease, and occasionally in health. How happens it that now there is increased determination to one part, now to another. We answer, that this arises from causes operating on the extreme vessels of the part affected. This shall

be briefly explained, first, by the most simple views, afterwards, by those which are more complicated.

It is well known that any stimulus acting upon an excretory duct increases the secretion of the gland, from which that duct leads. In this case, the fairest supposition seems to be that the excitement passes in a retrograde course from the duct to the secreting vessel. When a secreting mucous membrane is stimulated, it may be supposed that all or many of the little ducts are primarily affected, and that through them the excitement is conveyed to the secreting vessels. If the excitement be considerable, the capillary vessels which are reservoirs of blood for the secreting vessels undergo an enlargement, and thus furnish a supply for the increased secretion. According to the circumstances of the case there ensues either an immediate increase of the ordinary secretion, or a temporary stoppage of all secretion. In this latter case, the secreting vessels probably undergo some change, a change either of structure or of power; and then pus, or some fluid different from the common mucus of the part is formed upon the irritated surface. The same effects ensue, whether the surface be irritated by a stimulus applied directly to itself, or in consequence of sympathy with some other part. But how do the capillary vessels become dilated. This has been variously explained. It is not through the agency of the heart, from increased force in its action, nor from an increase in the quantity of blood it sends out, for it happens when the action of the heart has not been changed; and were it otherwise, the capillaries of the whole body should be dilated at the same time. The dilatation of the capillaries may be explained most fairly, by supposing the fibres of the coat which possesses *tonicity* to undergo elongation, not by a passive, but by an active operation. Thus far the local effects take place without any change in the action of the heart, or of the arteries conducting the blood to the part affected. But, when the excitement is considerable, the arteries connected with the part become also affected; they often are dilated, and they act with increased force or with increased velocity. If there be still greater local excitement, the heart, as well as the large arteries, becomes affected, and its contractions are increased in force, or in frequency, or in both respects.

Thus we conceive the heart to be affected by an irritation commencing in the small vessels, instead of supposing the heart by some mysterious process to act upon those vessels. We shall not, however, deny that in some cases the heart and the small vessels of some particular part are simultaneously affect-

ed in consequence of the action of a stimulus on the extreme vessels. Nor shall we deny that a disposition to disease in any part may be brought into action through the medium of an excitement of the heart, and the consequent increase in momentum of the blood conveyed to such part. But we consider this to be a much more rare case than Dr. Parry would lead us to believe; and as our view of the subject is connected with some of his fundamental principles, we have thought proper to offer it, although it is with diffidence we should dissent from the opinion of so great a master.

We will add that Dr. Parry does not in his general views take into consideration so much, as we should think just, the doctrine of venous turgescence; a doctrine which has been much insisted upon by the ingenious and acute Dr. Armstrong.

That our readers may with greater certainty understand Dr. Parry's first principles, we subjoin the following extract from his "recapitulation."

"Thus have I endeavoured to shew, First, that the far greater number of the diseases, incidental to the human frame, depends, at some point or other of that succession of antecedent circumstances, which constitutes the chain of causes, on excessive momentum of blood, whether local or general.

Secondly, that this momentum is not, necessarily, always excessive absolutely, that is, in relation to the usual state of perfect health in the mass of mankind; but relatively to the state of the individual at the period given.

Thirdly, that many of those movements, which constitute what is called disease, and which, for the time, produce disorder of the different functions, whether of body or mind, are, in reality, processes, the general tendency of which is to restore health, and to prolong life; although, on particular occasions, their operation may be either defective, on one hand, or excessive, on the other; or may be even sometimes directed to parts, which seem, as it were, unnecessarily implicated in the vain and fatal conflict.

The view, which I have thus taken of animal pathology, is consonant to that simplicity, which pervades all the other known operations of nature. The blood is the material, from which, by the aid of its appropriate system of vessels, the animal is formed, its life preserved, and its health maintained: and by the immediate affection of the same system, it chiefly suffers disease, decay, and death.

This theory is of a very different character from those, which deduce the greater number of diseases from an assumed disorder of one particular viscus, or local function. It is founded on an observation of certain like phenomena, occurring in a system existing in every part of the body: and, therefore, constituting a law, under

which are comprehended the affections, not of one part only, but of the whole frame.

Neither is it at all incompatible with the opinions of certain ingenious pathologists, who would investigate the ulterior design of the several morbid movements of the animal system. On the contrary, while it admits, and even assumes, the general principle of salutary purposes, it tends to ascertain the means, or instruments, by which those purposes are effected. pp. 459—461.

Although we have taken pains to state the author's leading principles, it must not be understood, that the value of his work depends entirely on them. Yet we shall go no further, except to give an enumeration of the subjects he discusses, because it is impossible to follow him in details.

First, he discusses the subject of inflammation in a very able manner. Second, he treats of dropsy, and shews that this is a result of inflammation, or at least of increased momentum of the blood. Third, he explains spontaneous hemorrhages in accordance with the same general principles. Fourth, he considers the final causes of inflammation, dropsy and hemorrhage. Fifth, he treats of simple excessive determination, or fulness of blood, and to this he attributes many anomalous pains, and other phenomena. If we could venture to discriminate, we should call this one of the most useful parts of his book. He considers the effects of this excessive determination to various parts, but when he comes to the nervous system he stops. And sixth, he describes the structure and functions of that system. In doing this he pays great compliments to Drs. Gall and Spurzheim. Seventh, he discusses the mental faculties. And eighth, the nervous constitution and diseases arising from determination of blood to the nervous system. Under this head, we find one paragraph in which there is proposed an application of the author's general doctrine to nervous diseases, and in which he refers to a mode of treatment which he originated. We are unwilling to omit calling the attention of physicians to this subject, and, therefore, quote the paragraph.

"That nearly all the modifications of the disorders, usually called Nervous, originate in excessive momentum of blood in the vessels of the brain, I long ago attempted to prove, in an Essay sent to the Medical Society of London, and published in their Memoirs in the year 1788. In that essay was first fully detailed the fact, that by intercepting the flow of blood to the brain, by compression of the carotid arteries, excessive sensibility with regard to external impressions, head-ach, vertigo, spasmodic dyspnœa, hiccup, general convulsions,

and delirium, might be for a while wholly removed, or greatly mitigated."\* p. 297.

Ninth, the author gives additional proofs of the common origin of diseases. Tenth, he treats of defective determination of blood. Eleventh, he offers exemplifications of salutary processes. Twelfth, he explains excessive direct determination of blood from cold; and lastly, offers a brief recapitulation of his general views, of which the greater and most important part has been given in this article.

*An Essay on the Chemical History and Medical Treatment of Calculous Disorders.* By ALEXANDER MARCET, M.D. F.R.S. Physician to Guy's Hospital, &c. London, 1817. pp. 181.

DR. MARCET has a reputation in London as high in chemistry, as in medicine. The few analyses which he has published are remarkable for their accuracy, and are sufficient to shew that, so far as chemical knowledge is required, in forming a work of this kind, his qualifications are undoubted.

This is the first attempt which has been made to embody the facts accumulated in this department of science into a separate and distinct work. In the execution of it, Dr. Marct has availed himself of the labours of M. M. Fourcroy and Vauquelin, of Dr. Wollaston, and Mr. Brande, and added to their stock the knowledge acquired by his own researches and experience. We think it will be acceptable to our readers to give them a short account of the chemical nature of urinary calculi, and the treatment which has been found best adapted to remove or palliate the symptoms produced by them. This we shall do from the work before us.

Dr. Marct divides his subject into eight chapters. The first professes to treat of the different situations in which calculi are found in the urinary passages; and of the symptoms which they respectively produce.

Calculi are occasionally met with in all the appendages of the urinary organs, kidneys, ureters, bladder, prostate gland, and urethra. They are not unfrequently found both in the infundibula and pelvis of the kidneys, the size of these cavities increasing with the growth of the stone, and the substance of

\* Memoirs of the Medical Society of London, vol. iii. p. 77.

the kidney itself being proportionally absorbed during the deposition. Sometimes the renal concretion constitutes a single mass, and forms a complete cast of the pelvis, and its immediate ramifications, the texture of the kidney being so altered as to present the appearance of a mere cyst; at others there are distinct deposition in the infundibula. In the first case, it is obvious that the secretion of urine must be performed solely by the opposite kidney; yet in some instances this is attended with so little inconvenience as almost to escape notice.

Calculi are also sometimes found in the *ureters*, particularly in their superior part, where they expand into a sort of pouch or funnel, forming the cavity of the pelvis; and they are detained in this situation by the small diameter of the membranous tube, compared to that of its commencement. It is not probable, from the structure and functions of the ureters, that calculi can actually be generated in them, when in their healthy state.

The *bladder* is the most frequent seat of calculi as might be naturally expected, not only from the circumstance that all the urinary concretions, or their nuclei, formed in the kidneys or ureters, tend to fall into that organ; but also because a stone may be and possibly is, originally formed in the bladder itself.

The calculi are found either lying loose in the bladder, or several stones are fixed in distinct cysts or rugæ, formed in the substance of the bladder between the fasciculi of the muscular coat of the organ, and pressed against others lodged in contiguous rugæ, so as to impart to each other by collision those regular faces and angles which are often observed in such concretions. A remarkable case is adduced to illustrate the fact that the most frequent effects of stone in the bladder were prevented from taking place, by the peculiarity of situation just described.

Small calculi of an oblong or spheroidal shape are also not unfrequently found in the *urethra*, the membrane of which from the inflammation excited, is apt to contract around the stone, so that it sometimes happens that an operation is required for its removal.

Concretions of a peculiar kind are likewise liable to form in the *prostate gland*. These are usually numerous and small, seldom exceeding the size of a pea, and the enlarged prostate sometimes forms on each side of the urethra a kind of cyst, in which the calculi are found collected. This appearance is

illustrated in a plate. Most commonly, however, the calculi are imbedded in the thickened substance of the gland.

The following are the symptoms of the stone.

*In the kidneys.* Long continued pain in the region of the kidney with discharge of purulent urine, not unfrequently attended with copious hæmorrhage. Yet cases of this kind occur in which these symptoms are scarcely perceptible, one of which is related. Dr. Marct thinks that it is rather during the passage of a calculus from the kidney to the bladder, than during its formation, that the greatest pain is experienced. In the latter case it is obtuse, while in the former it is pungent, shooting along the ureters, and attended with numbness in the thigh of the affected side, and a drawing up of the testicle. The urine is scanty, high coloured, and deposits a brick-red sediment. Sometimes a thickropy mucus is voided with the urine, or some such substance is after a while deposited. After all, the occurrence whether in succession or simultaneously, of these symptoms, cannot be considered as an absolute demonstration of the existence of this disease, unless calculi have been actually discharged, since such symptoms have been produced simply by inflammation of the organs.

*In the bladder.* Uneasy sensation, or pain at the glans penis, particularly after a violent effort, change of posture, or the expulsion of the last drops of urine—this pain gradually becomes more constant—the desire to void urine more and more frequent—and the difficulty of effecting it greater and greater, and while passing, suddenly stopping, facts which were considered by Sir James Earle as diagnostics of the disease. This difficulty can be removed for the time only by altering the position of the stone—this calculous disposition is accompanied with disorder of the digestive organs and the symptoms of dyspepsia. The ensuing symptoms are tenesmus, exasperated by exercise, increase of pain and irritation, greater derangement in the chylopoietic organs, debility, and death. In such cases the structure of the bladder is always found to be more or less altered; it is generally thickened and contracted, and its mucous coat extensively diseased.

*In the urethra.* A stone in this canal may be discovered by a partial or total suppression of urine, by a severe pain in the part in which it is lodged, and by subsequent inflammation and tumefaction in the part itself.

*In the prostate gland.* When a stone is lodged here and has arrived at a certain size, there is commonly some difficulty of voiding urine, and a sense of uneasiness about the neck of the bladder. But experience has shewn that concretions can

exist in the prostate gland without producing any great inconvenience, and sometimes even without their existence being suspected. A decisive diagnostic, therefore, of the presence of stones in this gland, is still wanting. Dr. Marcet mentions one case in which the stones were discovered by the grating of the catheter, and by examination *per anum*.

The subjects of the *second* chapter are, the different prevalence of urinary calculi in various districts and hospitals; and the comparative frequency of the disease in different countries.

This chapter contains some curious facts and calculations upon the proportion of calculous cases in different places, the average success of the operation, and the proportion of males to females who were the subjects; but we have not room to notice them. The inferences drawn by Dr. Marcet are, that sufficient evidence has already been obtained to shew, that in some establishments, both in England and other countries, a remarkable uniformity prevails in regard to the frequency of the disease, while in other instances, a great discordance is observable; and that none of the circumstances commonly suspected to influence this disorder, can satisfactorily account for this variety of results.

The *third* chapter is devoted to the consideration of the different species of urinary calculi, of their external characters, and of their chemical nature and classification. The species of urinary calculi are stated by Dr. Marcet to be nine in number. 1. The lithic calculus. 2. The bone-earth calculus, principally consisting of phosphate of lime. 3. The ammonio-co-magnesian phosphate, or calculus in which this triple salt obviously prevails. 4. The fusible calculus, consisting of a mixture of the two former. 5. The mulberry calculus, or oxalate of lime. 6. The cystic calculus, consisting of the substance called by Dr. Wollaston, cystic oxide. 7. The alternating calculus, or concretion composed of two or more different species, arranged in alternate layers. 8. The compound calculus, the ingredients of which are so intimately mixed, as not to be separable without chemical analysis. 9. Calculus from the prostrate gland. To these Dr. Marcet has added two others discovered by himself. 1. The Zanthic oxide. 2. The Fibrinous calculus.

1. *Lithic Calculus.* It is of a brownish or fawn colour like mahogany, of a smooth, though occasionally finely tuberculated surface, and formed of concentric layers, which are sometimes homogeneous, at others heterogeneous. It is hard, inodorous, and sparingly soluble in water, from which it separates

on cooling in yellowish particles. Lithic acid is not much acted upon by ammonia, but is soluble in solutions of the fixed alkalies, from which it is precipitated white by all the acids. It is insoluble in muriatic and sulphuric acids, but dissolves in nitric acid, and the residue when evaporated to dryness assumes a bright pink colour. It is not operated upon by the alkaline carbonates, and is but very sparingly soluble in lime-water. Before the blow-pipe, it blackens, emits a peculiar odour, and evaporates, leaving a small mass of white alkaline ash. By destructive distillation it yields a peculiar sublimate, a thick oil, carbonate of ammonia, with prussic acid, carbonic acid, and water, and one sixth of charcoal remains.

2. *Phosphate of Lime.* The surface of this calculus is generally of a pale brown and smooth; it is of a laminated structure, of little coherence, and appears to be formed of striæ. It is soluble in nitric and muriatic acids. Before the blow-pipe, it first blackens and then becomes white, and fuses with great difficulty.

3. *The Triple Calculus.* The white crystalline sand often discharged by urine, consists principally of the triple phosphate. It also constitutes the greater part of concretions which exhibit minute sparkling crystals upon the surface, or between the interstices of other calculus laminæ. They are generally whiter and less compact than those of the former class. They exhale the odour of ammonia before the blow-pipe, diminish in size, and suffer imperfect fusion. The crystals which are tri-lateral prisms, are sparingly soluble in water, but are dissolved by the acids, and become crystalline when again precipitated. The ammonia is disengaged by caustic alkalies, and sal ammonia may be obtained from them by the aid of muriatic acid.

4. *Fusible Calculus.* Next to the lithic, this is the most common of the urinary calculi; it is whiter and more fusible than the preceding species, is friable like chalk, and separable into layers, which are often studded with sparkling crystals of the triple phosphate. They often acquire a very large size. They are mixtures of phosphate and triple phosphate of lime. The triple phosphate is soluble in acetic acid, and the simple phosphate in muriatic acid, a small residue of lithic acid being left. Carbonate of ammonia precipitates the acetic solution; and oxalate of ammonia the muriatic. Phosphoric acid may be detected by adding to the remaining liquid muriate of magnesia and then carbonate of ammonia both in solution, the ammoniaco-magnesian phosphate being precipitated. This species forms a white vitreous globule before the

blow-pipe. The concretions formed around foreign bodies lodged in the bladder, generally consist of this substance, or the mixed phosphates.

5. *Mulberry Calculus.* This species is generally dark brown or nearly black, hard in its texture, and covered with tubercles or protuberances, and derives its name from its resemblance to the fruit of the mulberry. It consists of oxalate of lime, with a little phosphate, and lithic acid. It is soluble in muriatic and nitric acids; is not affected by caustic alkalies, but is decomposed when digested with their carbonates, carbonate of lime being formed. It is likewise decomposed at a red heat, the oxalic acid being destroyed, and quick-lime remaining.

6. *Cystic oxide*, has a yellowish semi-transparency, and a peculiar glistening lustre; it is not formed of distinct laminæ, but appears as a confusedly crystallized mass. Exposed to heat it gives out a very peculiar and foeted smell. It unites both with acids and alkalies, and as it forms carbonic acid during its distillation, it must contain oxygen. Its compounds with the acids and alkalies both crystallize. It is not a common calculus.

The two new species of calculi, the *Xanthic oxide* and the *Fibrinous*, being very rarely met with we shall not describe.

The fifth chapter contains observations on the comparative frequency of the different species of urinary calculi. Of 181 calculi, which Dr. Marcket examined from a collection made at the Norwich Hospital, consisting of 506 specimens, 66 consisted of lithic acid; 4 of phosphate of lime, either pure or alternating with triple phosphate; 49 of fusible phosphate, often mixed with triple phosphate; 41 of mulberry calculus; 19 of the above substances in distinct layers; and 2 of an undefined mixture. In the above 181 cases the proportion of deaths from the operation of extraction was as follows: lithic calculus, 1 in 7 1-8; phosphate of lime, none; fusible calculus, 1 in 6 1-8; mulberry calculus, 1 in 20 1-2; mixed calculus, 1 in 3 1-6. These observations offered curious results. The mulberry calculus with its rough tubercular surface yielded a much smaller proportion of fatal cases than any other species; and "it seems to shew, that it is not so much the mechanical irritation of the stone, as the particular diathesis of the urinary secretions, which influences the event of the operation."

Chapter sixth relates to the analysis of urinary calculi, &c. The contents of it we have anticipated in describing the different species of stone.

The *seventh* is devoted to the description of some other kinds of animal concretions, not belonging to the urinary passages, both in man and other animals. This we shall pass over, in order to dwell more at large on the subject of the *seventh* chapter, which exhibits the chemical and physiological principles to be attended to in the *treatment* of calculous disorders.

When the operation is not resorted to, Dr. Marct concludes that it is in a great measure from chemical principles that our views of treatment must be derived. Hence the first object is to ascertain the chemical constitution of the urine. A variety of salts are found to be dissolved in this liquid; the least soluble, and those which constitute the deposits, are phosphate of lime, phosphate of magnesia, and lithic acid.

The two first are holden in solution, partly by phosphoric acid and in part by lactic acid. Healthy urine when first voided is acid, from the presence of lithic and lactic acids, and an excess of phosphoric acid. On standing it deposes phosphate of lime, and lithic acid; and when decomposition commences, phosphate of lime, and ammoniaco-magnesian phosphate. Hence a precipitate of these salts always takes place when a few drops of liquid ammonia are added to recent healthy urine. Lime-water likewise produces a copious precipitate of phosphate of lime. The acids on the contrary precipitate lithic acid. *It is on these two general facts that our principles of chemical treatment ultimately rest.* Whenever the lithic secretion predominates, the alkalies are the appropriate remedies; and the acids particularly the muriatic, are the agents to be resorted to, when the calcareous or magnesian salts prevail in the deposit. But the question may be asked whether acids or alkalies can actually be conveyed to the urinary passages through the medium of the circulation? With regard to the alkalies, Dr. Marct affirms that the fact has long been decided in the affirmative; and particularly quotes the authority of Dr. Bostock, and Mr. Brande. With respect to the acids the question is not so easily resolved, but the author inclines to the opinion of Mr. Brande, that they likewise pass in their uncombined state to the urinary organs. But in either case the quantity is so small that their beneficial effect is to be ascribed more to their power of checking the prevailing dia-thesis, than to any immediate action on large pre-existing calculi.

There is another mode of viewing the effects of these agents; and that is, their influence in producing the desired changes in the first stages of assimilation; in one case, by neutralizing any morbid excess of acid in the *primæ vicæ*; and

in the other by checking a tendency to alkalescence, or otherwise disturbing those affinities, which, in the subsequent processes of assimilation and secretion, give rise to calculous affections.

The modes of administering these remedies present no difficulties. Few stomachs are liable to be materially disturbed by moderate doses of mineral acids, or carbonated alkalies. Even when disposed to acidity, they will generally bear muriatic acid properly diluted; and such stomachs are sometimes benefited by its use. The mineral are considered as better than the vegetable acids, because the latter may possibly undergo decomposition. "From 5 to 25 drops of the strong muriatic acid taken two or three times a day, sufficiently diluted with water, are the doses in which I have usually administered that medicine."

The alkalies are most conveniently taken in the form of soda-water, in which the carbonated alkali, being supersaturated with carbonic acid, loses its caustic and disagreeable taste; so that a tumbler-glass full, containing from 1-2 to 1 drachm of carbonate of soda, may be conveniently taken twice or thrice a day; or where such waters cannot be procured, from 5 to 20 or 30 grains of carbonate of soda, dissolved in a sufficient quantity of water, may be substituted. The carbonates of the alkalies, and even the citrates act upon the urine in the same way as the caustic alkalies. Dr. Marcet, in opposition to the opinion of Mr. Brande, thinks it very improbable that carbonic acid passes from the stomach to the kidneys. Magnesia has often been substituted for the alkalies in the treatment of calculous disorders; particularly in cases of lithic calculus. But some caution is requisite in using it; and it is thought by the author that much evil has resulted from its improper administration. Where it is prescribed without any previous knowledge of the nature of the calculus, the chance that it will prove injurious is about equal; because this earth constitutes the basis of one of the most common calculi, viz. the ammoniaco-magnesian phosphate; and it may act not only by affording a base, but likewise by neutralizing in the *prime vic* any portions of uncombined acid, by means of which the calculous matter might have been held in solution. That this may actually happen, says he, I have myself within the few last years, repeatedly witnessed. Another inconvenience attending the habitual use of magnesia is the accumulation and consolidation of large masses in the intestines and elsewhere, as pointed out by Mr. Brande.

Alkaline medicines, likewise, act as palliatives; they lessen irritation, and produce an increased flow of urine.

The secretion of large quantities ofropy mucus, which takes place in the bladder and urinary organs from the presence of calculous matter, promotes the formation of concretions; particularly of the chalky or fusible kind. The use of alkalies tends to increase this inconvenience by precipitating from the urine the mucus which is held dissolved by the excess of phosphoric acid. Muriatic acid on the contrary assisted by plentiful dilution, sometimes checks in a remarkable degree, this secretion; but at the same time increases the irritation in the bladder. The treatment on chemical principles, therefore, must sometimes yield to collateral considerations.

The mucus thus secreted is inferred to be one of the cements which bind together the different layers of a calculus.

The greatest difficulty experienced in the treatment of calculous disorders on these principles, arises from the alternation in the calculous deposits. Dr. Prout remarks that when the urine contains urea in abundance, the phosphates generally prevail; while if it abound in colouring and extractive matter, we may conclude that the prevailing secretion is lithic acid.

With regard to the treatment when the mulberry calculus, the cystic oxide, and the two new calculi predominate, it is by no means settled. Dr. Wollaston observes that those vegetables should be avoided which are known to contain oxalic acid; and in the first the alkalies may be employed with advantage to allay irritation. But the greatest benefit will be derived from the acids.

A brisk purgative often has a very good effect in promoting the discharge of calculous matter or gravel, and also in giving a temporary check to its formation. This is most striking in the case of gout.

Dr. Henry states that a mixture of turpentine and opium has produced a plentiful discharge of lithic acid, and he saw several instances of the kind by the use of a quack medicine, apparently composed of these ingredients.

With regard to diet, it is of great importance to regulate the food both as to quantity and quality. People of gouty and calculous habits are subject to an acrimonious state of the digestive organs. Hence those articles are obviously to be avoided which are liable to become acid. Upon the whole however, Dr. Maracet considers this great liability to acidity in such patients, rather as a dyspeptic affection, than as the original cause of calculous disorders.

"Upon the whole, it appears exceedingly probable, on reviewing all the phenomena of calculous disorders, and in particular, on recollecting the benefit which is frequently ex-

perienced in this disease from the use of cathartics, and also from that of various tonics, that these affections most frequently originate from a deranged state of the digestive organs ; and that such remedies as may fail in being of use as chemical agents, may still often prove beneficial by their tonic or stimulating effects."

The functions of the skin have probably a much greater connexion with the formation of calculi than has been commonly imagined. Calculous affections are comparatively rare in warm climates ; and in temperate climates the proportion of lithic acid in the urine is diminished, while the body is in a state of perspiration. In the morning the urine contains less acid than afterwards.

Injections into the bladder of very diluted acid or alkali according to circumstances, have likewise been practised. They should be as strong as is consistent with their retention for at least half an hour, and should be frequently repeated with great perseverance.

We have thus given an abstract of this valuable work. It contains the results not only of the author's own experience, but also of the researches and observations of Fourcroy, Wollaston, and Brande. At the end are eight plates elegantly engraved and coloured, the figures of which are referred to in the text.

*Lectures on Physiology, Zoology, and the natural history of man, delivered at the Royal College of Surgeons.* By W. LAWRENCE, F.R.S. Professor of Anatomy and Surgery, &c. 8vo. London, Callow, 1819.

**M**R. LAWRENCE is known to the public by a valuable treatise on ruptures and by some other publications.—The present work contains four lectures on Zoology and Physiology, and seventeen chapters on the distinctions between man and animals, and on the varieties of the human species. These interesting topics furnish the materials for a volume of 600 pages.

Previously to entering on his subjects, Mr. Lawrence occupies some pages in replying to the charges of Mr. Abernethy, who in a recent work had accused him of propagating opinions detrimental to society, and subversive of the principles on which the order and welfare of mankind depend. Mr. Lawrence in repelling these charges avows his principles as a materi-

alist, but at the same time, with quite as much warmth as the subject needs, vindicates the grounds of his opinions from the imputation of immoral or irreligious tendency. A history of the modern progress of comparative anatomy closes the first lecture, in which the names of Buffon, Pallas, Hunter, Blumenbach and Cuvier occupy a distinguished place.

In the second, third and fourth lectures, the author enlarges on the studies of Zoology and comparative anatomy, Physiology and the nature of life. After detailing the usefulness and application of the former sciences, and after some discussions on the science of life, Mr. Lawrence arrives at that part of his course which is to contain his argument that the phenomena of the mind are no more nor less than functions of the brain. He mentions that the same kind of facts, reasoning, and evidence, which shew that digestion is the function of the alimentary canal, motion of the muscles, the various secretions of their respective glands; prove that sensation, perception, memory, judgment, reasoning, thought, in a word, all the manifestations called mental or intellectual are the animal functions of their appropriate organic apparatus, the brain. If it be said that thought is inconsistent with matter, and that it is difficult to conceive how medullary substance can perceive, remember, judge or reason; he replies, that the same difficulty attends the explanation why the liver secretes bile, how the muscles contract, or how any other vital purpose is effected; and that this difficulty does not stop here but applies even to the most common facts in natural philosophy and chemistry, all whose remote and ultimate causes are equally inexplicable. The magnitude, delicate organization, and secure lodgement of the brain, seem to prove that it has a function of its own to perform, something more than to afford mere residence to an immaterial tenant. The history of the mind from birth to death shews that it keeps pace with the body. In infancy it is weak and infantile; as the brain grows larger and firmer, the mind gradually strengthens, it becomes adult when the development of the frame is complete, it is male or female according to the sex of the body, in the period of perfect organization it is seen in the plenitude of its powers, it decays with the decline of organization, and become decrepit with the body.

The additional proofs advanced by this work to shew that the mind depends on a material structure, are taken from the correspondence of intellectual phenomena and cerebral development in animals, which in some of the more sagacious species is more perfect than it is in ideots of the human race.

The author maintains then if an immaterial principle is necessary to produce the phenomenon of reasoning in man, it is no less necessary in brutes, who exhibit traces at least of this principle. Insanity according to him proceeds from disease of the brain, as disturbed functions in other cases do from diseases of their respective organs, and hence it is that insane patients are as much the subjects as any others of medical treatment administered to the body.

We have no objections to the above arguments, most of which have been adduced by materialists of older date, to shew that the phenomena of mind depend on the instrumentality of the brain. We ought however distinctly to state that these facts are by no means incompatible with the existence of an immaterial spirit as a distinct essence, of which the brain is during life the agent and organ.

In his natural history of man, which constitutes the second and largest part of the work, Mr. Lawrence gives the specific characteristics which distinguish man from other animals; in collecting which he has drawn largely, as he has in many other parts of the work, from the two most distinguished authorities of the present day, Blumenbach and Cuvier. After considering the gradation and affinity which has been supposed to exist between man and some other animals, and after dismissing the opinion of Monboddo and others that monkeys belong to our species, and that men themselves once had tails; the author is disposed to make man not only a distinct genus but even an order by himself. The characteristics which divide him from other animals are the following: "Erect stature, hands two, teeth approximated and of equal length, the inferior incisors perpendicular. Prominent chin, rational, endowed with speech, unarmed, defenceless." The generalizations of Linnæus by which he declared himself unable to distinguish man from the *apes*, are pretty fully abandoned by modern naturalists. In examining in detail the several characteristics which have been mentioned, Mr. Lawrence shews that the erect attitude is natural to man and belongs to him only, other animals being able to sustain this attitude either not at all or for a short time only. The peculiar structure of the human spine, thorax, pelvis, and especially the lower extremities, are alone adapted to this attitude and to progressive motion on two feet. The upper extremities are also peculiar, and man is the only bimanous or two-handed animal. The tribe of monkeys being furnished with four hands are organized for climbing, their progression is on all fours, and the erect posture is not natural to them.

In the farther prosecution of this subject we are told that the human head differs widely from that of all animals, in the proportion of the cranium and face, in the facial line and angle, in the structure of the bones, in the teeth and lower jaw; that the brain is much larger in proportion than that of any other animal, and that various internal organs have a structure wholly peculiar, that menstruation belongs only to the human female. That man is the only being that can inhabit all latitudes from the equator to the polar regions, and can subsist on all kinds of food from that of the Greenlanders and Esquimaux who are exclusively carnivorous, to that of many tropical tribes who subsist upon fruits and vegetables alone.—Man is also formed to subsist in communities, his long infancy, slow growth and late puberty, as well as his frequent sickness and decrepitude, render him peculiarly dependent on his fellows, and makes society not only a natural, but a necessary state. Laughter and weeping belong only to man, and reason and speech are his noble and exclusive prerogatives.

The second section of the natural history of man is devoted to considering the *varieties* of the human species. Are mankind all of one species descended from a common parentage, while their differences of colour and form are the effect of variety only; or are they of different species from the beginning? After a due consideration of this question with its various arguments pro and con, the author concludes in favour of the unity of the species. Since the question cannot be decided from history, he takes the analogy of the animal tribes as the most satisfactory ground for reasoning on the subject. After tracing the known changes which have occurred in various species of quadrupeds, he tells us that "there is no point of difference between the several races of mankind which has not been found to arise, at least in an equal degree, among other animals, as a mere variety, from the usual causes of degeneration." The instances are drawn chiefly from the domesticated kinds which by their association with man lead an unnatural kind of life, are taken into new climates and situations, and exposed to various other circumstances altogether different from their original destination. Hence they run into varieties of form, size, proportions, colour, disposition, faculties; which when they are established as permanent breeds, would be considered by a person uninformed upon these subjects, to be originally a different species. Of all this the species dog is a remarkable example. Wild animals on the contrary remaining constant-

ly in the state for which they were originally framed, retain permanently their first character. Man, says Mr. Lawrence, cannot be called in the ordinary sense of the term a domesticated animal, yet he is eminently domestic. Inhabiting every climate and soil, acted on by the greatest variety of external agencies, using every kind of food, and following every mode of life, he must be exposed still more than any animal to the causes of degeneration.

The varieties of the human species Mr. Lawrence considers to have been in the first instance native or congenital, and to have been ever since transmitted by hereditary succession. If however we should carry ourselves back in imagination to a supposed period, when mankind consisted of one race only, and endeavour to shew how the numerous varieties which now occupy the different parts of the earth have arisen out of the common stock and have become so distinct from each other as we find them at present, we cannot arrive at so satisfactory a decision; and we experience still farther embarrassment from the fact, that the races have been as distinctly marked and as completely separated from the earliest periods to which historical evidence ascends as they now are. But, says the author, the same remarks are in a great measure true concerning animals; so that on this ground no difficulty prevents us from recognizing the unity of the human species, which is not equally applicable to them.

Following the method of Blumenbach, Mr. Lawrence arranges the human race under five great varieties, the Caucasian, the Mongolian, the Ethiopian, the American and the Malay. These races or breeds are all subdivisible into others, but they appear to be the most easily recognized of any general divisions.

"1. CAUCASIAN VARIETY, so called from their supposed origin at or near Mount Caucasus. Their characters are a white skin, either with a fair rosy tint, or inclining to brown: red cheeks, hair black or of various brighter colours, copious and soft, generally more or less curled and waving. Irides dark in those with brown skin, light in the fair or rosy.—Large cranium with small face, the upper and anterior regions of the former particularly developed, and the latter falling perpendicularly under them. Face oval and straight, with features distinct from each other; expanded forehead, narrow and rather aquiline nose, small mouth. Front teeth perpendicular. Lips gently turned out; chin full and rounded. Moral feeling and intellectual powers energetic and capable of the highest development and culture."

It includes all the ancient and modern Europeans except the Laplanders, the inhabitants of the western Asia as far as the Ob, the Caspian and the Ganges, also the northern Africans of Barbary, Egypt, and Abyssinia.

2. The MONGOLIAN VARIETY; characterized by olive colour which in many cases is very light; black eyes; black straight strong and thin hair; little or no beard; head of a square form with low forehead, broad and flattened face, with the features running together; the glabella flat and very broad, nose small and flat, rounded cheeks projecting externally, narrow and linear aperture of the eyelids, eyes placed very obliquely, slight projection of the chin, large ears, thick lips. The stature, particularly in countries near the poles, is inferior to that of Europeans.

It includes the Chinese, Japanese, the inhabitants of the eastern parts of India, the Tartar tribes of central and northern Asia, as Calmucks, Siberians, Kamtschadales, also the Laplanders in Europe and Esquimaux in America.

3. In the ETHIOPIAN VARIETY the skin and eyes are black, the hair black and woolly; the skull compressed laterally and elongated towards the front, the forehead low, narrow, and slanting; the cheek bones prominent, the jaws narrow and projecting; the upper front teeth oblique, the chin receding. The eyes are prominent, the nose broad, thick, flat, and confused with the under jaw; the lips, particularly the upper one thick. The knees turn in many instances.

All the natives of Africa not included in the first variety, belong to this.

4. The AMERICAN VARIETY is characterized by a dark skin of a more or less red tint; black straight and strong hair, small beard, and a countenance and skull like the Mongolian. The forehead is low, the eyes deep, the face broad, particularly across the cheeks, which are prominent and rounded. The face is not so flat as in the Mongols and the nose more prominent. The mouth is larger and the lips rather thick.

This variety includes all the aboriginal Americans north and south, excepting the Esquimaux.

5. MALAY VARIETY. Brown colour from a light tawny tint not deeper than that of the Spaniards and Portuguese, to a deep brown approaching to black. Hair black, more or less curled and abundant. Head rather narrow; bones of the face large and prominent; nose full and broad toward the apex; large mouth.

The inhabitants of Malacca, the East India islands, the South sea islands of New Holland, &c. belong to this variety.

The work of Mr. Lawrence, the consideration of which we shall now conclude, contains learned and very interesting discussions on the colour, different tribes of the human species, on the hair, beard, features, shape of the skull and teeth; on the stature, figure, proportions and strength; on the diseases and longevity; on the acuteness of the senses, the language, and the moral and intellectual faculties. The whole embodies a rich fund of intellectual interest, and presents a copious source of information on the natural history of man, to those readers to whom the works of the great naturalists of France and Germany are inaccessible.

*Practical Observations on the Nature and Treatment of Marasmus, and of those Disorders allied to it, which may be strictly denominated Bilious.* By JOSEPH AYRE, M.D. Member of the Royal Medical Society of Edinburgh; one of the Physicians to the General Infirmary at Hull; senior Physician to the Hull and Sculcoates Dispensary; and Physician in Ordinary to the Lying-in Charity at Hull. 8vo. pp. 256. London, 1818.

[From the Edinburgh Medical and Surgical Journal.]

THIS book consists of three divisions. The 1st treats of the history and diagnosis of marasmus; the 2d of its pathology; and the 3d of its cure. At the close of the volume, there is, by way of appendix, a collection of cases illustrative of the whole. We shall briefly review each of these divisions in its order.

The history and diagnosis of marasmus occupy no less than ninety pages, and are pursued, we think, with too great minuteness. The author's facts and details seem to want that selectness and comparison so essential to a spirited account of a disease. His descriptions are often tame—not to say tedious,—and arouse an irksome suspicion that they have been needlessly spun out,—a suspicion that is not wholly appeased even by the great value of the practical observations which here and there present themselves as we proceed. We willingly acquit Dr. Ayre of the unfair arts of authorship—of any deliberate scheme to enhance the number or the cost of his pages by the procedure complained-of: on the contrary, we are sure that he has erred from an honourable motive—an over-desire of being exact and true to nature. Nevertheless, we retain our opinion

that, by dwelling so long on minute features—by employing the same pains—the same *traits de plume* on the lesser or casual shades, as on the larger, bolder, and more constant features of the portrait, he has detracted considerably, if not from the faithfulness, at least from the strikingness of the general resemblance. This censure, however, is scarcely applicable, except to the first division of the work.

The disease here treated of under the name of Marasmus, has received different appellations from different writers: it is the “worm fever” of popular phraseology; the “febris lenta infantum” of Hoffman; the “hectica infantilis” of Sauvage; and the “infantile remittent fever” of Dr. Batter and other modern physicians. Dr. Ayre considers it to be the same complaint as the bilious disorder of adults; but that marasmus and bilious disorders are really convertible terms, is an axiom that will not, we apprehend, be admitted by any one but the disciple of the hepatic school; unless, indeed, the term “bilious disorder” receive a greater latitude of interpretation than we are inclined to give to it. But of this more hereafter.

He divides marasmus into two species, the acute and chronic,—a distinction, we think, singularly judicious, and traced by the author with a much greater degree of clearness than heretofore. The acute readily passes into the chronic form, and *vice versa*: indeed, we believe the chronic form is almost always the precursor of the acute attack. In chronic marasmus, the patient is languid, drowsy, and morose; the appetite is diminished or depraved; the urine scanty, turbid, or milky, (the latter appearance, by the bye, is not noticed by our author;) the bowels are extremely irregular, being either torpid, or affected with diarrhoea, and the evacuations have an unnatural colour and odour. There is generally a distention of the abdomen, and some pain at the epigastrium. The sleep is disturbed and unrefreshing night-sweats generally attend; and the extremities are apt to become cold. The face is pallid, the features heavy and inexpressive, and the whole skin has a sallow, pasty appearance.

After these symptoms have continued a longer or shorter time, first febricula, and then fever, distinctly come on, and now the acute form may be said to commence. At first there are evening exacerbations, with complete remissions during the fore part of the day; but, in the course of the disease, the remissions become more irregular and imperfect, the paroxysms are more severe, and are attended with delirium and other marks of determination to the head, threatening cerebral effusion. The morbid and irritable condition of the lining mem-

brane of the alimentary canal soon extends itself to the tongue, (which becomes deeply furred,) and is propagated, by continuity, even to the mucous membrane of the nose and trachea. Hence arise that troublesome cough, and that picking of the nose, (in children particularly,) which are such constant symptoms of this complaint. The cough Dr. A. calls a "biliary cough," and considers it to be the product of "biliary irritation," acting sympathetically on the lining membrane of the larynx and trachea. We hope that he himself attaches some precise meaning to this "biliary irritation," because, for our part, we cannot, and we are little disposed, at this time of day, to put up with an indefinite term in lieu of an idea. Let us, however, waive his theory, and attend to his facts. He cites several instances where this cough has produced ulceration of the larynx, and subsequent death; and others where it simulated all the symptoms of phthisis, which, however, readily yielded to remedies directed to the function of the liver. Some interesting cases of the latter description we ourselves have met with more than once.

The causes of this disease are cold, improper food, such as unripe fruit, pastry, or confectionary, (in which children are so often perniciously indulged,) spirituous liquors, eruptive fevers, and sedentary employments. To these we are inclined to add difficult dentition: but Dr. Ayre, with what degree of reason we cannot see, conceives this to be always an effect, and never a cause of marasmus, (p. 21.) That difficult dentition, however, is very frequently an idiopathic affection, and, *per se*, excites febrile disturbance in the whole system, and a local disorder in the alimentary canal, is a matter not of speculative opinion, but of undeniable fact. Not many months ago, we had occasion to see a child, which, for a good many days, had laboured under a harassing diarrhoea, that reduced it to a state of great extenuation. Alternative laxative and astringent remedies of various kinds had been employed to check the looseness, but in vain. On examining the mouth, which had not been suspected as the cause of the mischief, we found the gum at two points in a distended and apparently inflamed state. We forthwith divided it freely with the gum lancet, cutting down till we felt the instrument rasp on the subjacent teeth. The tension and local irritation being thus removed, the diarrhoea ceased spontaneously *on the following day*, and the little sufferer rapidly became plump and strong. Cases of a similar nature must be familiar to every practitioner conversant with infantile complaints; and it is needless to add, that they overturn the opinion of Dr. Ayre,—an opinion, we think, not a

little hardy and gratuitous. We can be at no loss to believe, *a priori*, that the irritation of teething should excite commotion both in the organs of circulation and digestion, when we recollect that the fifth pair of nerves and the par vagum arise from the same spot in the brain, and have thus a pretty direct communication with each other. It is ascertained, from many observations, that sympathy is always most close between parts supplied by branches of the same nerves, or by nerves whose trunks either communicate with each other, or arise from the same part of the centre of sensation.

In the diagnosis betwixt marasmus and mesenteric fever, the author lays much stress upon the greater hardness, tumefaction, and tenderness of the belly in the latter than in the former disease, as also on the state of the stools, which, in mesenteric fever, he says, bear a greater resemblance to the *ingesta*. But we may remark, that these pathognomonic signs are deceptive, and that we have met cases where a diagnosis was absolutely impossible. The difficulty will often arise from both diseases being complicated in the same patient, a thing that not unfrequently happens. Notwithstanding these remarks, we recommend this part of our author's work to be carefully studied.

Dr. Ayre has also taken up the diagnosis betwixt acute marasmus and hydrocephalus, (or *phrenitis hydrocephalica*, as it has been called by Sauvage, and which we think a much more correct denomination, in a nosological point of view;) but it is no disparagement to him, when we say that he has left the subject in the same unsatisfactory state in which he found it. In fact, modern writers, of the greatest talent for observation, have confessed the difficulty of an accurate diagnosis; for there are no symptoms, however characteristic of the one disease, that are not, now and then, found to belong to the other. Our author considers sudden screamings, delirium in the day-time, double vision, and the slow, intermitting pulse, as with certainty denoting hydrocephalus; but even to this there are exceptions, though doubtless rare ones. The late Dr. Heberden, no mean authority, after enumerating, with his accustomed fidelity, the more striking symptoms of hydrocephalus, adds these memorable words: "Neque tamen perpetuum est ut hæc signa ex hydrope cerebri nascantur; etenim vidi ea omnia in pueru cuius cerebrum non nisi consueta humoris copia humectatum erat, teste peritissimo anatomico qui cadaver inciderat." (*Comment. de Morbor. Hist. et Cur.* p. 186.) In the early stage of either disease, when, from the anxiety of relatives and of the practitioner, a diagnosis is most eagerly desired, we think the following circumstances may assist our judgment. If there are occa-

sional vomitings, with febricula, the tongue, at the same time, remaining clean, there is much reason to apprehend that the primary irritation has its origin and seat in the brain, and that the disease will turn out hydrocephalus. But if, along with the fever and vomitings, the tongue be covered with a thick, creamy, or yellow fur, we are warranted in hoping that the complaint is confined to the digestive organs, and that it will turn out to be only infantile remittent fever. We submit this remark to the attention of Dr. A., in the course of his future experience.

In the more advanced stage, fortunately, the diagnosis, in a practical point of view, is of no material consequence : for we contend, that the practitioner would be wanting in his duty who should forget that pure marasmus readily may, and often does, induce fatal effusion on the brain,—or who should fail to combat the symptoms by the most active treatment, when they seem to menace that important organ. For our part, when we find a state of general fever existing—the heat of the head greater than that of the rest of the body—delirium by night or by day—vomiting—dilated pupils—intolerance of light—drowsiness—thirst, and the like, we are disposed to care little whether these alarming symptoms arise primarily within the brain, or are secondary to and symptomatic of, irritation in the *principia viæ*; the issue in both cases being alike fatal, if energetic measures be not adopted. We leave the *name* of the disease to be determined by the event ; and, in the mean time, employ blood-letting, purgatives, tepid bathing, and blisters. We say we allow the *name* of the disease to be determined by the event ; by this we mean, that if it be acute marasmus, our active exertions will generally succeed, but if hydrocephalus, they will as generally fail. The correctness of this last remark is strongly exemplified in the remarkable case related by the late Mr. Benjamin Bell, in the 4th appendix to Dr. Hamilton's valuable work on Purgative Medicines, p. 225.

This leads us to notice the most serious fault of Dr. Ayre's work, namely, his unaccountable neglect in not recommending the vigorous treatment here described, in every doubtful case. His opinions about “biliary irritation acting sympathetically,” seem to have taken such a fast hold of him, that to unload the intestines, and, above all, to emulge the liver, are represented as the one thing needful in the cure. This, we assert, is doing the business only by halves ; for, though unquestionably these particulars are of great importance, we cannot see why they ought to supersede the use of the lancet in such cases of marasmus as are attended with much pyrexia, or determination to the

head. Even a high degree of general fever, independently of any local determination to the head, is in children extremely dangerous, when it continues long; for, owing to the greater size and softness of the infant brain, its parenchyma is apt to yield, and to be irreparably injured, under the impulse of excited circulation. The author pleads his experience against the utility of general blood-letting in acute marasmus; but here we can oppose experience to experience, and state our own conviction that, in children especially, nothing so readily subdues the dangerous symptoms as blood-letting. We may remark, by the way, that in cases of urgency we have not trusted to the slow and too often inadequate evacuation by leeches, but have frequently opened the external jugular vein, a procedure which we wish to see more frequently resorted to by practitioners, inasmuch as it is very easily done, and, moreover, better deserves the old eulogium of "tuto, cito, et jucunde," than any other mode of blood-letting applicable to children.

We next proceed to the chapter on the pathology of the disease, by far the ablest and most original portion of the volume. It reflects great credit on Dr. Ayre; and even had he written nothing else, this would have entitled him to the respect of the profession.

He is of opinion, contrary to the respectable authority of Dr. Hamilton, (vid. Hamilton on Purg. Med. *passim*,) that the mere accumulation of feces in the bowels is not, in itself, a cause of marasmus; and that it is not simply by their unloading the intestines, that purgatives are so eminently and rapidly useful in this complaint. To the justice of this opinion we are disposed to subscribe, though for reasons in many respects different from those of Dr. A. But before stating our grounds of difference, it is no more than fair to allow him to unfold his pathological view in his own words.

"The view which has been attempted to be taken of the pathology of marasmus, I may here briefly repeat to be.—1. That this disorder consists in a deranged and imperfect action in the secretory function of the liver, and a consequent deficient and unhealthy secretion of bile, as is manifested by the alvine discharges not having that colour which is always imparted to them by it, when it is secreted in a healthy state, and in the proper quantity.

"2. That this derangement in the function of the liver commonly arises from a disorder commencing in the stomach; for the function of digestion is performed by organs whose actions are accordant and co-operative; the healthful action of the liver depending upon a stimulus imparted to it by the stomach.

" 3. That in certain deranged states of the stomach, there is either a morbid or an imperfect stimulus given to the liver, by which its secretory function is impeded, and a bilious fluid produced, that is deficient in its quantity, and commonly of a morbid kind.

" 4. That, as an interruption in the accustomed actions of a secreting organ occasions a congestion of its vessels, the diminished secretion of the bile gives rise to a congestive state of the vena portarum and its branches.

" 5. That in consequence of those efforts which nature makes to free herself from disorder, this congestive state is sometimes spontaneously removed by a copious secretion of bile, constituting the bilious diarrhoea, or the cholera morbus ; and that in other cases it is temporarily relieved by an hemorrhoidal flux, or by the discharge of blood from the loaded extremities of the vena portarum ; occasioning in this latter case, and when in small quantities, the black and often putrid stools ; and when in excess, the idiopathic hæmatemesis, or melæna," &c. &c.—p. 120, 122.

It thus appears, that Dr. Ayre holds irregular or imperfect secretion of bile to be the "causa sine quâ non" of marasmus. This opinion is, he thinks, justified by the morbid colour of the alvine evacuations throughout the disease. He argues that, since the feces in a state of health derive their peculiar colour from the bile, any change in that colour must depend entirely upon changes in the biliary fluid. This accounts for the dejections being at first clay-coloured, afterwards dark brown, yeasty, green, or tar-like. When the evacuations are perfectly black, he conceives that colour owing not only to vitiated bile, but to an admixture of blood derived from the congested extremities of the vena portæ, and poured by the pori biliarii into the intestines. It is obvious this opinion takes for granted, that all the secretions poured into, or supplied by, the bowels, are colourless, an opinion advanced by our author as a distinct proposition, but which we think quite untenable. We admit that, in a state of health, these secretions are nearly destitute of colour ; but under disease the case is far different : Then, indeed, the secreting surface of the villous coat of the intestines is deranged along its whole track ; and every little gland and mucous follicle pours forth its appropriate secretion wonderfully altered in colour, as well as in other sensible qualities. How else shall we account for the inky stools in the last stage of typhus, or for the quantity of mucous slimy colluvies evacuated almost hourly in dysentery ? In marasmus, even upon Dr. A.'s own hypothesis, it would require the secretion of bile, instead of being deficient, to be in prodigious excess, to tinge

so deeply the almost incredible quantities of feculent matter voided in this disease. That the intermixture of unhealthy bile deepens the colour of the feces, we do not deny; but we maintain that the other vitiated secretions of the alimentary canal have a share equally large in effecting that change.

Besides, it appears to us highly probable, that in this, as well as some other diseases, causes wholly unconnected with the depraved secretions either of the liver or intestines are accessory to the production of morbid stools. It should be recollectcd, that in every case where the stomach is considerably disordered, digestion is either not at all, or but very imperfectly performed. By consequence, the ingesta pass downwards little changed, and run into fermentation, sometimes of the acescent, and at other times of the putrefactive sort, just as if they were exposed to parallel circumstances of heat and moisture out of the body. When their elements thus re-act upon one another, gases are extricated, some of which (the sulphuretted hydrogen for instance) have the property of communicating a dark tinge to the whole alimentary or fecal mass. Moreover, a large portion of the morbid matter, of all colours, existing in the intestinal contents, during disease, may be reasonably considered as nothing else but varied deposits from one or both of the fermentations above mentioned, in their different stages.

We have descanted the more minutely about the colour of the stools, because this appears to be the greatest, if not the only proof advanced by the author in support of his view of the pathology of marasmus. As to that pathology itself, Dr. A. must excuse us when we say, that it is too narrow, and evinces an over-weaning partiality for the tenets of the Jatro-hepatici—the pathologists who refer every sort of disorder of the digestive organs to a depraved liver. That the regular action of this mighty gland is of great importance to health, no one will deny; also, that its function is impaired or deranged in marasmus, we readily admit; but we contend that *its* secretion is depraved only in common with the secretions of all the other chylopoietic and assistant chylopoietic viscera; and that the relative importance of its derangement as a cause of the disease (for doubtless it is in part a cause) is by no means paramount, but perhaps of only secondary consequence, when compared with the derangement of the other organs and secretions more immediately necessary to digestion and assimilation.

Upon the whole, we take it, that a derangement of the function of secretion in *all* the chylopoietic viscera, leading in no

long time to a weak and irritable condition of these viscera, is the true state of the system in marasmus. As the function of secretion is the direct result of the nervous influence, and as the organs in question are all associated in one nervous union, it is to be expected that, when the function in question suffers, it will suffer contemporaneously in all. From this it follows as a corollary, that our curative efforts should be directed, not to restore the healthy secretion of the liver merely, but to rectify also the vitiated secretions of the stomach and intestines, and to free them from the morbid stimulus of crude unassimilated ingesta, and of acid or putrid feces. Purgatives, by acting upon the entire line of the alimentary canal, and thus giving a salutary stimulus to the whole plexus of abdominal nerves, are admirably adapted to this great purpose.

We were exceedingly pleased with Dr. A.'s views of the cause of hematemesis and melena, and with his judicious directions to treat these complaints by purgative medicines.—He conceives the blood in these cases, evacuated by vomiting and by stool, to be derived wholly from the liver. This is very well, but alas! there is nothing new under the sun; the same opinion is advanced in an inaugural dissertation on tropical dysentery published here two years ago;\* and, on farther research, we find the same thing, or something nearly similar, stated at pp. 181, 182, of Dr. Saunders's excellent work on the liver. In the matter of the treatment by purgatives, too, our author is anticipated by Dr. Gasking of Plymouth, and Dr. Hamilton of the Royal Infirmary of this place. These little particulars we bring forward from no wish to offend Dr. Ayre, or detract from his just merits, but from our inviolable regard to the just principle of "suum cuique."

The chapter on the treatment need not detain us long.—Dr. A. has been in the habit of trusting entirely to purgatives in this disease, giving a preference, for the most part, to calomel. In adults there is less need for discrimination in the choice of the purgative, but when children are the sub-

\* *Dissert. Inaug. de Dysenteria Regionum Calidaram.* Auct. Archibald Robertson. Edinburg, 1817. The words are, "Admodum credo particulæ sanguinis rubras e minutissimis Venae Portae ramulis absque mutatione detrudi, et demum in poros biliarios effundi. Ibi sanguis cum bile inguinata miscetur, et cito in canalem alimentariam transit. Color sanguinis nigerrimus huic opinioni de ejus origine hand parum favet; quia bene novimus sanguinem Venae Portae, aliarum venarum sanguine nigriorem." p. 29.

jects of this complaint, drastic ones should be carefully avoided, on account of the greater irritability of the infant habit.—Even calomel, in such cases, will be found too irritating, unless its doses are followed up in an hour or two by castor oil. In our own practice, we are in the habit of triturating the calomel with chalk, and exhibiting it in the proportion of one or two grains of the former, to four or six of the latter.—This combination seems to render the calomel less nauseating, and obviates its tendency to gripe: whether this mitigation be owing to the chalk's absorbing and neutralizing the free acid in the primæ viæ, or to some more obscure influence, we are not prepared to say. The tepid bath, also, in such cases, has admirable effects in allaying irritation.

Cholera in persons of all ages, the author treats with half a grain, or one-third of a grain of calomel, repeated at short intervals. We doubt much whether these minute doses possess any superiority over the larger and more active ones.—We ourselves have very successfully employed the latter, generally, however, in combination with opium.

We give the greatest praise to Dr. A. for the earnestness with which he has enforced a daily minute inspection of the alvine discharges. It is only by watching the changes they spontaneously undergo, and the advances they make to their natural colour and fetor, that the physician can judge of the effect of his remedies, or of the progress of convalescence.

Though we have been constrained to dispute some of our author's leading tenets,—of his book, as a whole, we would be understood to speak very favourably. It manifests both talent and observation. Its subject is comparatively new; for, until the useful works of Dr. Hamilton \* and Mr. Abernethy,† the influence of depraved digestive organs on general health and local disease was very imperfectly comprehended, even by the best informed of the faculty. But the inquiry has now obtained that full attention its importance deserves; and Dr. Ayre is entitled to the praise of having added to the facts and practical observations collected by the two eminent individuals just named.

\* "Observations on the Utility and Administration of Purgative Medicines, in several diseases." Edinburgh, 1805.

† "Surgical Observations on the Constitutional origin and treatment of Local Diseases." London, 1806.

# INTELLIGENCE.

and

## Domestic.

### THE LATE FEVER IN BOSTON.

THE state of health in the town of Boston within the last three months, has excited an alarm in the public mind altogether disproportioned to the actual amount of disease. We will not however call this alarm unjust; since a very mortal disease, however limited in extent, ought to excite alarm, so long as its sources and therefore the means of avoiding it are not ascertained. If however they can now be pointed out, the public may be saved unnecessary agitation and know how to avoid danger, should the same causes produce the like effects in future.

Without being influenced by that local partiality, which often dictates such statements, we may say, that very few, if any places, of the same size as Boston are more exempt than this town from epidemic and mortal fevers. Three deaths from fever within a week will at any season arrest the public attention; which would not happen, if this were to occur frequently. In the year 1798, we had among us an epidemic fever, which passed under the name of yellow fever, and which was no doubt of the same character, as the disease which has been known elsewhere under that name. This disease was limited in its extent, occurring only in persons who lived or passed much of their time about the Town-dock, State-street, Liberty-square, around Fort-hill, and in some similar situations; that is to say, in parts which are low, and on the eastern and southern borders of the town, though not in every situation of this kind. The number of persons affected at that time was very small in proportion to those, who have suffered under a similar epidemic in

some of the other cities in our own country, and in some cities in the south of Europe within the last twenty-six years.

In the year 1802, the same disease appeared within much narrower limits. It was confined to the neighbourhood of Fort-hill; that is, it appeared in its mildest form in Liberty-square, which is on the north side of the hill, and in a more severe form in Purchase-street, the lower part of Summer-street, and a little in Sea-street and High-street. A few persons underwent the disease in other parts of the town; but they were persons who had passed some time, not merely visited, in the places above-mentioned; and the disease did not extend from such persons to others who attended them.

The fever, which has appeared this year, has been confined to limits still more narrow than in 1802. It has been around Fort-hill, but mostly within one small square on the southeastern side of the hill. The longest side of this square is about twenty-five rods in length. This square is bounded by Purchase-street, High-street, Griffin-street, and Gibbs' lane. The disease did not even extend over the whole of this square, but has been almost confined to the half nearest Purchase-street. There have however been a few cases in the vicinity of this square, and perhaps two or three on the other borders of the hill. It has likewise happened now as in 1802, that persons who have contracted the disease on the ground above described, have sickened elsewhere; but the disease has not in this way been extended to other persons. Since the above statement was drawn up scattered cases of the same disease have appeared over a larger extent, but still in a circle around Fort-hill. These cases have been somewhat more mild than those, which occurred in July and August. The fatal ones have not terminated so early, as had happened in most of the other cases. The most strict investigation in respect to some of these later cases has shewn that the disease had not been derived from those previously sick.

The first cases of the disease, which has been described as to its situation, occurred about the last of June, or the first of July. The character of this disease shall be given presently; but we must first point out a distinct source of fever, which was of later date, and which it is important to distinguish from the other. This source was the ship Ten Brothers, from Africa, by way of Martinico. This ship arrived at Quarantine, about the 26th of July, and came up to the town on the 1st of August. The facts in relation to this ship are in the course of investigation, by the board of health. It does not appear that the Captain, who we are told is a man of great respectability of

character, or the Health Officers of the town, were at all aware of any cause of disease in this ship, when she came up to the town. The Captain received his wife and child on board when at Quarantine, and kept them with him three or four days. It has however been stated by people of veracity that the ship was extremely foul, so as to be offensive to the senses, even when coming up the harbour, and of course before her cargo was started.

Many persons were on board this ship after her arrival, and while her cargo was unloading, and the great majority of them have remained in health. But among them a number, how many is unknown to us, but we believe about twelve, have been seized with a fever of very bad character, and almost every one so seized has died. These persons have been sick and died in various parts of the town; but, with a single exception, the attendants on them have escaped the disease altogether. The facts in respect to this exception are stated in the note, which is subjoined from George Hayward, M.D. The respectable character of this gentleman makes it unnecessary to add any remarks to his statement, except that we have learnt from him that the disease in the second case was of the same kind as in the first.

According to the foregoing statement fever has appeared in town from two distinct sources. As usual however in every case of a malignant disease, there have been persons, who have attempted to show that the whole was of foreign origin. To this subject we have attended without prejudice, but we have not found any reason to believe that the disease on Fort-hill was introduced from abroad. That it was not derived from the ship "Ten Brothers" is sufficiently evident from dates. At the moment when the first distinctly-marked cases occurred on the hill, every investigation was made to trace them to a foreign source, but in vain. This investigation was prosecuted by persons of different opinions on the general question at issue, but with the same result.

To us there is evidence in the circumstances, which have been detailed, and quite independent of any consideration of the character of the disease, sufficient to show its local origin. This evidence consists in the occurrence of the disease in so many instances in one vicinity, while the rest of the town was healthy; and the non-occurrence of it among those, who attended on the sick, when removed from that vicinity to other parts of the town. If, for instance, the ship from Africa had arrived in the town before the first cases of the disease, instead of a month afterwards, would it not have been very singular that a

disease from her should spread to so many persons in one small district, and not extend in other parts of the town? How much more singular would it appear, if no one in that district had been known to visit the ship, while in other parts of the town eight or ten persons, who had been known to visit her, had become sick and died, but had not occasioned the disease to spread in their respective neighbourhoods?

If there be any evidence, which would place this subject in a different light, we shall be most ready to publish it;—for it would make us most-happy to learn that not a single spot in our metropolis was capable of generating a mortal disease, however limited that spot may be. Meanwhile, we see no reason for apprehending any injury to our reputation from telling the whole truth; and as the case now stands, we believe this to be one of the most healthy cities in the world.

Something must be said in respect to the character of this disease. The most remarkable circumstance about it was its tendency to a fatal termination. At such termination it arrived in the great majority of cases, and under different modes of treatment, although the disease presented various aspects at its commencement. Likewise, in most cases, death was preceded for some hours by a great failure and sometimes an entire loss of the pulse at the wrist, while the patient felt easy and even comfortable, or else was comatose. Some cases were marked by severe rigors and great pain, with hard and full pulse; some by coma; some by black vomit; and in some instances all these symptoms occurred in the same case. Perfect stupor, resembling intoxication, great heaviness, with suffusion of the eyes, extreme restlessness, spontaneous hemorrhages, convulsions, and very irritable stomach with vomiting of bile, as also yellowness of the skin and of the tunica conjunctiva were occasionally noticed. Most of the fatal cases terminated on, or before the fifth day; but some persons, in the same vicinity, with the worst cases, died after a much longer time, one even in the seventh week of his disease. These longer cases and some of the shorter ones had at first no other characteristics than are common to our autumnal fevers; nor did every case show any others to the last.

The strength of the poison producing the disease was shown more by its fatal effects, than by the violence of the first symptoms of the disease; at least, this is true in respect to many of the cases. In some persons therefore the disease was neglected as unimportant until fatal symptoms showed themselves. In others the attack was formidable, and arrested instant attention.

It must be understood that the preceding observations refer to the Fort-hill disease.

What was the poison, which was so virulent, and yet so limited in its operation? This is a most interesting question, and it would gratify us if we could give a definite answer to it. Some answer however is furnished by a careful attention to the facts; an answer, which does not identify the poisonous substance, but which points out the circumstances, under which it was developed.

What is the poison which produces fever in any case has never yet been answered more definitely. Something is obtained however when it is learned that marshy soils produce remittent and intermittent fevers; and that they have this effect more particularly at certain seasons and in certain years. The disease we have described, seems quite as clearly to have originated from the soil, though we cannot point out its peculiarity. It was not a marshy soil. The principal seat of the disease was on the side of a hill, where the declivity is sudden and sharp. There was not any *extraordinary* filth about the spot. The houses of the poor and the yards about them were dirty, but not more so certainly than the dwellings of the poor in other parts of the town, nor so much so as many houses in the country. The population was not crowded in a remarkable degree. There are extensive flats in the neighbourhood, but not so extensive as in some other places, and these flats are covered by the salt water once in twelve hours. We might however have thought it possible that they furnished the morbid poison, but that the people who were on the side of Purchase-street nearest the water, and whose situation in other respects was not preferable to that of their neighbours, and whose houses are lower on the hill as well as nearer the flats, were comparatively free from the disease. The inference seems to us inevitable then that the cause of the disease originated either in the earth, or the water, which belonged to the houses where the sick resided. That it was the earth and not the water, seems to us most probable from general considerations, which we will not stop to discuss. But that it was the earth is rendered still more probable from this circumstance, viz. that no cases of the disease occurred in the houses in Hartford-place, where the earth has recently been removed for several feet from the surface in order to build those houses, although this place is in the square where the disease was most prevalent, and was very near to houses in which it prevailed. It is certainly not improbable that the safety of this place was owing to the

removal of the old soil. The water there probably did not differ from the water in the neighbouring wells.

Whatever may be the peculiarity in the soil, which we have referred to, there is reason to believe that the agency of a certain degree of heat with a certain degree of moisture is necessary to bring into activity the poison, which it furnishes. It is only in summer and autumn, and only in certain years that it can be developed.

The circumstances, which have been mentioned, serve to show that the poison, which produces the disease in question, cannot be conveyed to the distance of even a few rods in a horizontal direction; or at least not without being so diluted by the common atmosphere as to render it innoxious.

It would gratify us to close this article by pointing out the method of treatment, which might be relied on for the removal of the disease. But on this subject the experience, which the whole season has furnished here is too small, even had it all fallen to the lot of a single individual, to have enabled any of us to have come to this task so well prepared as many, who have already treated of the same disease.

In general we were satisfied that evacuations at an early period were beneficial. They mitigated suffering and prolonged life, when they did not save it. Blood-letting was requisite in the majority of cases; but in some instances evacuations from the alimentary canal were alone admissible. At a late period cordials and stimulants were clearly indicated, and perhaps tonics were sometimes useful. Opiates often gave great relief, but it was sufficient to give very small doses.—Cold applications externally and vesication were highly beneficial at different stages. Most of the patients had irritable stomachs, and it was requisite to limit them as to the quantity of their drinks. This difficulty was not augmented however, but rather prevented by the use of emetics at the commencement.

We add the note, already referred to, from Dr. Hayward jun. The few cases of fever derived from the ship "Ten Brothers" were so divided among different physicians, that it would be difficult to obtain a general description of that disease. We therefore do not attempt such a description.

DEAR SIR,

Boston, Sept. 11, 1819.

THE following statement will, I trust, give you all the information you desire concerning the two cases of Yellow Fever that occurred in Newbury-street; the facts I am confident may be relied upon. I have frequently examined the

surviving members of the family upon the subject, and have found no disagreement in any important particulars.

John Bryant was taken with pain in his head and back, on Saturday evening August 7th, after having been at work on the four preceding days on board the Ten Brothers. He took an ounce of glauber salts on Sunday, and felt so much better on Monday as to walk out a short distance; in the afternoon however he vomited though not severely. Early on Tuesday morning he felt no worse, but between ten and eleven o'clock A. M. he began to vomit again, which continued with short intervals only, until his death; my father and myself visited him at one o'clock for the first time, and he died in half an hour after. As he had all the symptoms of immediate dissolution when we saw him, no medicine was given. He was buried within two hours; the room and entry were fumigated by pouring sulphuric acid on common salt, and the ceilings were all white-washed.

On Thursday evening following, Harriett, the youngest sister, complained of being unwell, but her disease appeared to be very mild, until Sunday morning at six o'clock when she was taken with the black vomit, and died at four o'clock in the afternoon.

The brother during his sickness was attended wholly by the mother and elder sister, the younger one was not more than once, if at all, in the room with him. About two hours before his death he changed his shirt, which was taken by his mother, put into a tub of boiling water and beaten with a stick, which she did, she said, from a fear of handling it. His other clothes were buried with him. The pillows of the bed upon which the brother was sick were soaked through with the discharge thrown from the stomach, and Harriett on the afternoon of his death, took the pillow cases and endeavoured to remove the stains occasioned by the vomiting, by washing them with her hands and a small brush. On the following morning the pillows were ripped open and she picked over with her fingers the feathers that were matted together by the blood and other fluids discharged from the stomach. She was a considerable time in doing this and of course constantly exposed to the exhalation from the feathers. No one assisted her in this.

At the time of her death I was informed by some one not connected with the family, that she had taken her brothers cloaths and put them into a tub for her mother to wash, I have since satisfied myself that this was not correct. On the day preceding her death, the sister was on the bed with

her the whole afternoon, but she as well as the mother have enjoyed uninterrupted health. The whole family consisted of six members; the father and younger brother went out of town on the evening preceding the brother's death, and returned on the evening previous to the death of the sister. They were all removed to Rainsfords Island immediately after the sister was buried. They returned in a few days, and not one of them has been sick an hour since, nor "has any other person contracted disease from that family."

I have said nothing scarcely of the symptoms or medical treatment, as you wished only for the facts connected with the question of contagion.

I am with much respect,  
Your obedient servant,  
GEORGE HAYWARD.

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[The following letter was received too late for an earlier insertion in this number. Ed.]

*An account of the Croup, as it prevailed at Plainfield, Massachusetts, in June, 1810. By JACOB PORTER.*

[Communicated for the New-England Journal of Medicine and Surgery, in a Letter to a Friend.]

MY DEAR SIR,

To record the history of prevailing diseases forms an important duty of the physician. No apology, therefore, is necessary for presenting you with some account of the croup, as it prevailed here in June last; especially, as the treatment which I adopted, was singularly successful.

The spring was, in general, cold and backward. Blue-birds appeared on the fourteenth, and robins on the sixteenth of April. The former part of May was very cool, some flakes of snow falling on the fifth and seventh days of the month. The latter part was very warm and dry. The former part of June was very cold. On the eighth day, commenced a cold and severe storm, which continued about a week. Showers, with or without thunder, were afterwards very frequent. The ground became very wet, and the air extremely damp. Several days were warm and sultry.—There were, about this time, several sporadic cases of the spotted fever. The hooping cough had also, for some months, been a prevailing disease, and had now become unusually severe.

Those attacked with the croup were, so far as I know, without an exception, children under two years of age. It commenced with a rattling noise in the throat, the well known attendant of this disease. The head was often very hot, sometimes the abdomen, and in some instances, the whole body. The stomach was, with great difficulty, able to retain the medicines given, indeed, many of them were ejected by vomiting, almost as soon as taken.

My method of treatment was to give an emetic-cathartic of calomel and panacea or cerated glass of antimony, or the sub-sulphate of mercury. A common dose consisted of twenty grains of calomel combined with twelve of the panacea or cerated glass of antimony, or about four or five of the sub-sulphate of mercury. These medicines I frequently gave in much larger doses. They were repeated once or twice a day, according to the urgency of the symptoms. A decoction of the Seneka snake root was given in the intermediate space. This, in one instance, excited vomiting, though given in very small doses. In mild cases, after the emetic-cathartic, the calomel was given by itself. Its operation was often quickened with senna or castor oil. To a patient, who ejected almost every thing that he took, I gave twenty grains of calomel and twelve of the cerated glass of antimony by weight, without exciting vomiting. Cloths wet with a solution of the sugar of lead were applied to the head and abdomen, if uncommonly warm. In a few instances the warm bath was used with apparent benefit. To check the sickness at the stomach, I made use of the oils of spearmint, peppermint, and cinnamon, and of corn coffee. This last I found of singular service. Besides its anti-emetic quality, it makes a nourishing and grateful drink. In one case, in which there was an obstruction of urine, I give the bear-berry and gum arabic with the happiest success. The urine first discharged, the child's mother informed me, was hot as fire. In two cases, in which the hooping cough was united with the croup, ginseng and columbo were given to restore the strength.

Under this treatment, but one out of eight patients, who came under my care, died of the disorder. This was a girl three and a half months old. She was seized very severely about sunset. I was immediately called, and, as soon as I arrived, gave twenty grains of calomel and twelve of the cerated glass of antimony. This did not produce the least sensible effect. A consulting physician was immediately called; and the child was fed with squills and seneka snake root, but

died the latter part of the night. On dissection, the lungs appeared to be filled with bloody and purulent matter.

It may be proper to observe that the disease prevailed but little, except in that part of the town where I reside. A little after it prevailed, many children and adults complained of soreness of the throat.

For the method of cure, which I observe, I am indebted to a most interesting paper on the croup, published by Doctor Stearns in the fifth volume of the Philadelphia Medical Museum.

Plainfield, July 14th, 1810.

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## Foreign.

*On Ingurgitation, and a convulsive Species of Ebriety, considered in a Medical, Moral, and Forensic Point of View.*

[Partly from the French of M. Friedlander, Percy, Laurent, &c.]

1. *Drunkards.* The most sober individual may occasionally be drawn into a degree of inebriety, almost unconsciously; but he who accustoms himself to the use of strong fermented liquors gradually becomes what may be termed a drinker, and, if he check not the propensity, slides insensibly into a—drunkard! Few people pass through life without experiencing a fit of ebriety, and the sufferings, in such cases, are only temporary; but the nervous sensibility of the confirmed inebriate is daily blunted, and at length ceases to obey the action of stimulants. While these changes are going on in the body, a corresponding deterioration is manifest in the mind. A train of *evil dispositions* is too often generated, ending ultimately in sottishness. Drunkenness is, therefore, a real disease of the corporeal and mental functions.

When we reflect on the irresistible propensity towards intoxicating drinks which many people evince, we can hardly help attributing it to a morbid germ which has grown up in the constitution, or been transmitted from parent to progeny. The example of the father, indeed, must have a baneful effect on the mind of the child; and this is rendered still worse by the pernicious custom of giving wine, however small the quantity, to children and youths, by which the tone and functions of their digestive organs are deteriorated, and turbulent passions and dispositions engendered or developed. The female sex too imbibes the contagion, and in them it exerts

the most deleterious influence. Witness those unfortunate females who drown the memory of the past, the frightful anticipations of the future—the remains of moral feeling, and the bloom of health, in the ocean of ebriety!

There is an external character, a manner, an aspect in the inebriate, even when sober, which stamps him unequivocally, and distinguishes him from the man of habitual temperance. He becomes heavy and awkward in his gait; bloated in his countenance; his eyes and eye-lids are inflamed; he falters in his speech; his nose is red; his complexion shallow; his face covered with eruptions or excrescences; his abdomen rather tumid; his breath is foetid. He is subject to nausea in the mornings; his respiration is short, like that of an asthmatic; his stools are morbid in colour and smell; his urine turbid or sedimentous. His skin and muscles are flaccid; his hands tremble. He emaciates, and is overtaken with premature old age!

The manifestations of the soul correspond with the derangements of the corporeal organs and functions. He is incapable of attention; fails in his memory and judgment; becomes irresolute; timid—even cowardly. The morning hours hang heavy upon him, and he is miserable till he gets once more immersed in the fumes of the vinous or spirituous debauch! Finally, he sinks into sottishness and stupidity, and dies paralytic, apoplectic, asthmatic, dropsical, or maniacal.

It is on the digestive organs of the drunkard, however, that the evil effects of his intemperance more particularly fall. The liver and its secretions are deteriorated in a thousand different ways. In the distilleries and breweries, where hogs and fowls are fed on the grains left after distillation and fermentation, we find the livers of these creatures scirrhouς, indurated, and enlarged. So in drunkards, the constant irritation in the line of the digestive organs keeps up a determination of blood to those viscera, ending in congestion, chronic inflammation, and obstruction. The urinary organs, too, suffer from calculous affections, especially in the *wine-bibber*; but it is a remarkable fact that *beer drinking* rather confers an immunity from stone. Haller opened the bodies of three hundred and fifty beer-drunkards, and found only two instances of calculus. Cyprianus, on the other hand, who is said to have performed the operation of lithotomy fourteen hundred times, states that the greater number of his patients were wine drinkers.

The thoracic organs of the drunkard come in for a share of the consequences of inebriety. Hydrothorax, and struc-

tural as well as functional diseases of the heart, are the prominent features in this class, as has been amply shewn by Morgagni and Corvisart, and indeed as may be every day seen in this country. Intemperance in drink, as was before remarked, has a peculiar effect on the skin, in the way of eruptions, probably from the sympathy between the surface of the body and the liver. The rubicund nose of the drunkard may be accounted for in the same way. This feature of ebriety has been noticed both by poets and physicians. Shakspeare, that accurate observer of Nature, has given a striking and grotesque picture of a drunkard's nose, on the face of Bardolph. He compares it to a lighted coal, which serves to guide him from tavern to tavern, instead of a lantern. It is needless to say that all diseases, to which an individual is previously disposed, are exasperated by intemperance in drink; particularly gout and rheumatism, the latter probably from exposure to atmospheric vicissitudes, as is exemplified among sailors and soldiers. The generative system, in both sexes, suffers from ineptitude; even Plutarch remarks, that the progeny of drunkards are generally worthless. How much the brain and nervous system are deranged from excessive inebriation our Lunatic Asyla can mournfully witness! Of two hundred and sixty-four female lunatics in the Salpetriere at Paris, twenty-six became insane from intoxication. In the male sex the proportion is still greater; and in countries such as England and Holland, where more spirits and beer are drunk than in France, the number of insane persons from drink far exceeds that which is witnessed in the latter country.

2. *Drunkenness.* Every one knows the pleasing sensations which a few glasses of wine diffuse over mind and body. A sort of Elysium opens round the soul; the world presents nothing but flattering visions of happiness and prosperity; love, friendship, liberality, take possession of the breast; and if this scene could be prolonged, man would have little reason to envy the situation of the Gods. Indeed, Homer generally represents the guests of Jupiter, and even the Sceptre-bearer himself, as passing the bowl freely round the table. But the more exalted the pleasure, the more bitter the pain; the more vivid the excitement, the more speedy the collapse.—Let us visit this jovial assembly a few hours later in the evening and we shall find—

— — — Their feeble tongues,  
Unable to take up the cumbrous word,

Lie quite dissolved. Before their maudlin eyes,  
Seen dim and blue, the double tapers dance  
Like the sun wading through the misty sky.

If we examine the physical phenomena which attend this series of changes, from sobriety to stupor, we shall not be surprised at the serious consequences which must ensue from such a perturbation of the various functions. The action of the heart is inordinately excited, and the blood is driven with great violence to the head in particular, as is evinced by the florid swelling of the face; the turgescence of the vessels of the neck and temples; in short——

Polyphemus ————— in cerebro  
Cum suis Cyclopus malleat!

All the passions are turned loose, and without reason to restrain them:—in fact, the nervous and vascular systems are thrown into the most wild and tumultuous confusion.

After a stertorous sleep, or rather stupor, the inebriate awakes, and finds the Elysian fields transformed into a dreary desert! All the phenomena of arterial excitement are now changed into those attending venous congestion. The action of the heart, in truth, is so enfeebled after the orgasm, that this organ cannot unload the venous system; and the arteries by their own organic contractility force the blood into the swelling veins, and the balance of the circulation is completely broken. In the digestive organs, the functions languish, or are entirely suspended for a time, and, of course, the gastric, intestinal, and hepatic secretions are all deranged in quantity and quality.

The effects of *spirituous* and *malt* liquors on the human fabric are considerably different, as was observed, and humorously painted by Hogarth, in his caricatures entitled *Gin Lane and Beer Alley*. The ale-bibber is represented fat and unwieldy, as John Bull is generally drawn; the dram-drinker is lean, haggard, furious in his countenance, with a dash of despair.

When we survey the infinity of substances which possess the *inebriating principle*, we are naturally led to ask what it is? But this question is not so easily answered; for it would appear that it is not one common element diffused among all the class of intoxicating matters; but that there are several different principles which have this peculiar effect. Chemistry has not yet cleared up this point. The Rhenish wines, for instance, which contain very little alcohol, are as *heady* as

those of the South, which contain treble the quantity of spirit. Neither has it been quite ascertained in what manner the inebriating principle acts on the sensorium; whether by absorption, or through the medium of the nerves. Although alcohol, we believe, has never been detected in the blood, yet there can be little doubt that the sanguineous and other fluids of the body are occasionally impregnated therewith in habitual drunkards, and in excessive debauches. It is said that the body of Alexander the Great was preserved a long time after death by the quantity of liquors which he drank during life. It is worthy of remark, that the more the urinary secretion is augmented, while swallowing liquors, the less inebriation is produced. This is recorded in an ancient proverb, which runs thus:—" *qui bene bibit, bene minxit.*"—There is great reason to believe also that much of the intoxicating principle is carried off by perspiration; and in this way we can account for the sudden increase of drunkenness which takes place on going out into the cold air after full drinking. On account of the diuretic quality of Hollands and Geneva, it is more than probable that these liquors are, upon the whole, less deleterious to the constitution than rum, brandy, or whiskey. These reflections naturally lead us to the question, is there any anti-inebriating substance in nature? Plutarch informs us that Drusus, the son of Tiberius, always ate four or five bitter almonds before a feast, which enabled him to make all his companions drunk without being so himself.—Aristotle, Hippocrates, and Galen consider a clove of garlic (probably from its diuretic power) as a preservative of the same kind. At this time, the bitter almonds, oil, and coffee are used on the continent as anti-inebriates. It is well known that plunging a drunken man into cold water has often the effect of bringing him to his senses, as is frequently seen when intoxicated sailors fall over-board; but the experiment is not devoid of danger, and is not to be recommended. There is a general opinion that an occasional or even a periodical debauch in drink is salutary. This has passed into a proverb in France——

Qu'il faut, à chaque mois.  
S'enivrer au moins une fois.\*

And it is not improbable that when the excess produces sickness and vomiting, (as it generally does among the unac-

"A man should get drunk at least once a month."

customed to drink) the effects may be salutary. This we have frequently observed; but we are convinced that the succeeding good health and elasticity of spirits were principally owing to the vomiting; and that an emetic, without any intoxicating drink, would have had the same effects.

3. *Convulsive Drunkenness.* There is a species of ebriety attended with convulsions, which has not been sufficiently noticed in this country, but which must have fallen under the observation of almost every man.

All kinds of drink will produce this convulsive ebriety in particular, that is, in very irritable constitutions. But it is principally among soldiers and sailors, after drinking new rum, new wine, or adulterated spirits of any kind, especially if they are exposed to an ardent sun, that we meet this formidable complaint. It is for the most part, a few hours after the debauch that the convulsive symptoms appear. The man may leave the punch house, walk some way, and get home, without exhibiting any other than the common symptoms of intoxication; but presently he begins to feel a burning heat at the stomach; a giddiness in his head; a pain across the os frontis, which induces him involuntarily, as it were, to press it with his hand. His eyes sparkle, and his countenance becomes haggard, with subsultus tendinum and stertorous breathing. To these symptoms are added nausea, followed by convulsions, in which, if the unfortunate wretch happen to be alone, he may dash himself against the walls or floor, or precipitate himself headlong into the street. In this way we have seen two men perish.

There is little doubt but that this orgasm in the nervous and muscular systems, together with the pain in the head, arise from the great irritation in the stomach, the centre of sympathies, whence is propagated, by a species of irradiation, the same irritation to other organs and parts.

The first thing to be done when called to a case of this kind is to secure the patient, by sheets or napkins round the extremities and trunk, rather than by assistants; for it is not uncommon to see men seized with convulsive fits merely from the sight of another struggling in the same. Although the first and paramount indication is to evacuate the contents of the stomach, yet we should be cautious in exhibiting emetics. A small dose may prove ineffectual, and a large one may rupture the stomach, or increase the delirium and convulsions. Warm water, presented in a wooden or metal vessel, lest the patient should crush a glass one with his teeth,

is the best remedy at the beginning. After each act of vomiting, which ought to be solicited with a feather, the patient revives a little, but soon falls back into the previous condition. If warm water and oil prove inefficient, we may add some oxymel of squills, but antimonial emetics are dangerous in convulsive drunkenness, of which we could adduce many proofs, but the following case will suffice as an example.

A dragoon having drunk nearly a quart of brandy, fell into the state above described, of convulsive ebriety. Being carried to an hospital, the physician, mistaking the nature of the complaint, and supposing the convulsions to arise from indigestible substances in the stomach, as often happens, ordered two grains of emetic tartar to be exhibited, and repeated thrice before it operated. During this interval, the delirium and convulsions arose to a frightful pitch. The spasms and contortions were so violent that it was almost impossible to hold him; and when confined, he struggled so furiously as to cause all his joints to crack—in fact, to threaten a general dislocation. The vomiting came on in paroxysms, and was excessively violent. After repeated alternations of fury and syncope, the patient became a little sensible; but this calm lasted only a short time. It was succeeded by such excruciating pains and cramps in the stomach and hypochondria that he uttered the most piercing cries. This again was followed by a vomiting of blood in considerable quantities. The patient spat blood for a long time afterwards, and was affected with an obstinate tremor in all the limbs, which required a protracted use of warm bathing to remove.

In eighteen cases of convulsive inebriation, we only administered an emetic to one, and we had great cause to repent of our proceeding. He was a young cavalry officer in the Regiment of Berry, who, after a hearty dinner, drank a bottle and a half of a very strong aromatic Flemish liqueur. After this excess, he went out to walk with some of his comrades in a garden, outside of the city, where he diverted himself in singing and dancing. Finally, he took it in his head to undress himself, though the weather was by no means warm, and this in spite of the remonstrances of his companions.—He now tore even the shirt off his back, and his gaiety entirely changed to sullen sadness; which, in its turn, gave way to the most frightful and furious phrenzy. He threw himself on the ground, tore up the earth with his nails, gnawed the grass with his teeth, rolled about among bushes and thorns, and sent forth such terrific howlings as put the whole neighbourhood in a panic! Several of us ran to his assistance,

and endeavoured to secure him with our cloaks and sashes, but he wounded every one of us before we could accomplish this object. After administering some tea and warm water, without producing vomiting, we ventured to exhibit two grains of emetic tartar, which dose was repeated in three quarters of an hour, founding the indication on the indigestion which have resulted from the full meal taken immediately before the liqueur. The convulsions and phrenzy now became more violent than ever. He broke all the bands by which we had secured him to a tree, and we found it impossible to hold him down. Never was seen a more horrible spectacle; and what added to the distress was, that three officers who were present, caught, by sympathy, the complaint, and were seized on the spot with convulsions. Fortunately, however, a few pails of cold water poured on their heads, restored them to their senses and to tranquillity. By means of forcing down a quantity of warm water, vomiting was at length brought on, but it was not till midnight that the convulsions and cramps were conquered by means of sedatives, oily frictions, and opiate applications. These two cases may be sufficient to put us on our guard against the exhibition of antimonial emetics in convulsive drunkenness, especially where the inebriating material has been of a spirituous and fiery nature, or where there is any apprehension of inflammatory action resulting from violent spasm in the stomach.

In the year 1804, we were called to the assistance of a field officer attached to the Etat-Major of the sixth Corps, in the camp of Montreuil, remarkable for affability of manner, and gentleness of disposition. He had been engaged in a drinking match, where he had taken a considerable quantity of mulled wine, not wishing to be thought inferior to the other members of these Bacchanalian Orgies. At nine o'clock in the evening, not finding himself well, he returned to his apartments, where, his host and hostess having a large party, he behaved, to their utter astonishment, in the most scandalous manner. It was soon perceived that he was intoxicated, and he was solicited to retire to his chamber. He now conceived himself insulted, and threatened personal violence to any one who approached him. It was with the greatest difficulty that he was overpowered, disarmed, undressed, and confined to his bed by force. The servant presented him some weak tea, but he seized the vessel in which it was contained, and crushed it convulsively between his teeth into pieces. He seemed to applaud his finesse, in thus evading the drinking of the tea. He now uttered the most bitter in-

vectives against us all, and it was with difficulty we could prevail upon him to swallow some drink. Two hours passed thus before vomiting ensued ; but this was the signal for a calm after the tempest. He became reasonable, and submitted to our injunctions. An opiate afterwards procured sleep, and he awoke with only some lassitude and debility. He was, however, so ashamed of the affair, that he requested and obtained his dismissal. We afterwards met with him in a high official situation in a Foreign Court, but he persisted that he had never before seen us.

Ipecacuanha, though not so dangerous an emetic, in these cases, is not to be had recourse to till warm water has been tried in vain. If the convulsions continue after the vomiting, venesection is necessary, and especially if the stomach be threatened with any inflammatory affection, or if fever arise.

Blood-letting is also necessary where vomiting cannot be induced, since the weakness which it occasions is favourable to nausea and vomiting. The warm bath is hurtful at the beginning ; but after the stomach is disgorged of its contents, it is of great service, both in tranquilizing the system, preventing fever, and obviating those pains and that lassitude which follow convulsive inebriation. Open bowels and very light food, with diluent drinks, ought to be subsequently prescribed. The following case, which was communicated to us by Dr. Voisin, a distinguished practitioner of Versailles, will be read with interest.

" In 1810, a soldier addicted to drink, was charged with the care of conducting three young conscripts to St. Germain, where he lodged in the same chamber with them, on the second floor. Two of the conscripts retired early to bed, and the soldier, having got intoxicated, endeavoured, on his return, to force them from their bed, in order to occupy it himself.—This they resisted, and thrust him out of the room. He made much to do at first, but presently lay down and fell asleep on the stairs. The third conscript, on returning home, found the drunken soldier under his feet, and on knocking at the chamber door, would be admitted only on condition of not bringing the drunken man in with him. During the night they heard him toss about violently on the ground ; but as he had inspired them with more horror than pity, by his maltreatment of them, they uncharitably withheld from him all assistance. In the morning, this wretched soldier was found on the first flight of steps, covered with wounds and bruises, and quite dead ! The conscripts were suspected of having committed murder—a coroner's inquest was called—surgeons

examined the body, and attributed his death to the apparent wounds he had received. The conscripts were imprisoned.

Dr. Voisin having been consulted by the magistrates, conceived that the medical decision was premature, and though the body had been buried several days, it was disinterred, and Dr. V. in the presence of the magistrates and surgeons, proceeded to prove and substantiate the following positions :

" 1st. That the wounds were not in themselves mortal ; that the vessels of the dura and pia mater were gorged with blood, as well as those of the plexus choroides ; and that the ventricles of the brain contained a considerable quantity of water.

" 2. That the inferior lobes of the lungs were also gorged with blood in a dissolved state ; that the stomach was distended with gas, and contained near a pint of dark-looking flocculent liquid, exhaling a strong odour of brandy. The cardiac and pyloric orifices of the stomach were inflamed, and the mucous membrane was speckled with red spots throughout its extent. From these pathological facts, Dr. Voisin drew the following conclusion :

" The man whom we have examined was evidently in a state, 1st. of common drunkenness, which afterwards became convulsive, when he precipitated himself from the upper to the next floor, dashing himself upon the steps and on the pavement, so as to occasion the wounds and bruises that appeared on the surface of the body. Nevertheless, the death of the man was owing rather to the inflamed state of the stomach and the apoplectic condition of the brain, than to the external lesions."

This able physician thus saved the lives of three men who had only the sin of imprudence and uncharitableness, but not the guilt of murder, to answer for.

*Lond. Medico-Chirurg. Journal.*

*On the Efficacy of copious local Bleeding in various Complaints characterized by Pain and Spasm, as well as Inflammation. By J. F. VAIDY, M.D.*

GENERAL blood-letting has often failed in general diseases, from the timid manner in which it was employed ; and there is great reason to believe that local blood-letting, in local diseases, especially those termed *spasmodic*, has not been carried to an extent sufficient to insure success, in numerous instances. Our continental brethren employ this kind of evacuation much more frequently, and perhaps much more suc-

cessfully than we do ; therefore, we shall be wise in taking a lesson and a hint from our rivals—

Fas est et ab hoste doceri—

In the Journal Complimentaire des Sciences Medicales, for April 1819, M. Vaidy has related a great number of cases of various local affections, where very copious local bleeding, generally from thirty to forty leeches at a time, produced the most decisive and beneficial effects. We shall cursorily glance at some of these cases.

1. The *first* was a severe sciatica, which resisted general means. Three applications of thirty leeches each, completely removed the disease.

2. The *second* patient was M. Panckoucke, the Editor of the Dict. des Sciences Med. who was afflicted for some years with a most obstinate sciatica, that was not relieved by repeated applications of moxa, blisters, &c. In a recent and fierce attack, M. Vaidy was called, and applied twenty leeches to the thigh and ten to the leg. As the blood flowed the pain subsided. Next day, thirty-five leeches were necessary, and the relief was still greater than before. A third application of thirty leeches, a day or two afterwards, removed the disease ; which, in previous attacks, had continued some months. Several other cases of this complaint are here stated, all tending to confirm the foregoing.

3. *Tooth-ache.* A lady was seized with a violent tooth-ache, and inflammatory swelling of the jaw. She had neither eat nor drunk for four days. Twelve leeches were applied to the angle of the lower jaw. She was instantly relieved, and fell into a profound sleep ; on awaking, the complaint was gone.

4. *Gout.* Durand, a French Soldier, was received into the Valde-Grace Hospital, with gout in several of the joints, but especially in the right knee, where the pain was excruciating. Thirty leeches were applied round the knee, and that night the patient had some sleep, to which he was a stranger for some nights previously. In a day or two the pain subsided, and with it the symptomatic fever. He returned to his duty. Two months afterwards, he had another attack, which was treated in the same way, and with similar success.

5. *Acute Rheumatism.* Vallet, a soldier, 24 years of age, was seized with acute rheumatism of the right arm and knee in particular, accompanied with intense fever, head-ache, and total loss of sleep. He was bled largely from the arm,

which moderated the constitutional symptoms, but the local affection remained the same. Twenty-leeches were applied to each of the pained members, with almost instantaneous relief.

6. *Lumbago.* M. Vaidy employs copious local blood-letting in this complaint, followed by purgatives, and with the best success.

7. *Chronic Pleurisy.* Froisant, about 50 years of age, had experienced, for two years, a pungent pain in the left side of the chest, particularly under the shoulder blade, for which he tried several remedies. M. Vaidy ordered thirty leeches to be applied as near the spot as possible. The pain was removed at once, and did not afterwards return.

8. In the month of January, 1819, M. C. a musician had been, for some time, annoyed with a stitch in the left side, which checked his breath, and prevented him following his profession. M. Vaidy recommended him to abstain from wine, coffee, and carminatives, which he had been taking for his complaint, it being attributed, both by himself and his medical friends, to *wind*. The application of fifteen leeches to the side completely removed this "*windy stitch*," which all the carminatives he could swallow were unable to effect.

Here Dr. Vaidy exclaims against the routine custom of giving aromatics, stimulants, and carminatives, in what are termed *spasmodic* affections; but which, in reality, are chronic inflammations, that are kept up and rendered worse by the practice.

9. *Chronic Pulmonitis.* Deale, about 40 years of age, was for some time affected with a deep and fixed pain under the left nipple. This region of the chest, when examined by percussion, sounded badly. He was obliged to sit upright in bed. Thirty leeches were applied to the seat of pain, which was thereby greatly relieved, but the dyspnoea remained. A seton was cut in the side, and the wound bled so profusely, that the seton was obliged to be withdrawn. The day following, the patient was pale and depressed; but the respiration was free, and the pain in the side scarcely perceptible. The fright occasioned by the haemorrhage was now converted into joy at the delivery from his complaints. This soldier returned in a few weeks to his military duties.

Various other cases, of a similar tendency to the foregoing, are related, all evincing the utility of carrying *local blood-letting* to a much greater extent than we are accustomed to do. We hope the attention of the faculty, on this side of the channel, may be strongly directed to this interesting point of therapeutics.

*An Explanation of the real Process of the "Spontaneous Evolution of the Fœtus," with some Remarks, &c. &c.*  
 By JOHN DOUGLAS, M.D. Licentiate of the College of Physicians, Ireland.

DR. DOUGLAS has witnessed seven cases of the spontaneous evolution of the fœtus, and his view of the *modus operandi* of nature, in such instances, is far more intelligible to us than Dr. Denman's theory, which every one is acquainted with. All practitioners acknowledge that shortly previous to the evolution, the shoulder of the child is forced very low in the pelvis, and the thorax occupies so much of its cavity as to preclude the practicability of passing the hand into the uterus. The parts abovementioned, instead of *receding* into the uterus, are, at each successive pain, forced still lower, until the ribs of that side corresponding with the protruded arm, press on the perinæum, and cause it to assume the form of the forehead in a natural labour. At this period the arm and shoulder can be perceived externally. By further uterine contractions the ribs are forced more forward, appearing at the os externum. The entire of the fœtus now resembles the larger segment of a circle; the head rests on the pubis internally; the clavicle presses against the pubis externally; with the acromion stretching towards the *mons veneris*: the breech is either in the hollow of the sacrum or at the brim of the pelvis, ready to descend into it. By a few further uterine efforts, the remainder of the trunk, with the lower extremities, is expelled.

In respect to the arm originally protruded, Dr. D. affirms that not one line of it or any other part, once descended, ever is withdrawn again into the uterus. The arm and shoulder merely go more forward on the symphysis pubis externally. Such is precisely the process minutely observed in seven different cases. In no instance did the process require more than six hours. The infants were, of course, still born, and must be so. The following are the circumstances which would induce our author to prognosticate a spontaneous evolution, and a safe result. "If the arm of the fœtus should be almost entirely protruded, with the shoulder pressing on the perinæum—if a considerable portion of its thorax be in the hollow of the sacrum, with the axilla low in the pelvis—if, with this disposition, the *uterine* efforts be still powerful, and if the thorax be forced sensibly lower during the presence of each successive pain, the evolution may be expected with great confidence." p. 43. *Medico-Chirurg. Journal.*

*Efficacy of blood-letting in the dropsical affections consequent on Scarlatina.*

Although the discoveries which have been made during the late period respecting the pathology of dropsy, clearly indicate the appropriate therapeutical measures in the generality of cases, yet, as it is in physics as well as in morals, maxims and precepts effect but little without examples, we shall adduce some observations of Dr. TWEEDIE,\* to shew the efficacy of blood-letting in the dropsical affections consequent on scarlatina.

J. M. æt. five years, was affected with general anasarca, more particularly of the face and upper extremities; frequent short cough, with hurried and oppressed breathing. The urine was scanty; pulse 130, skin hot, and the tongue furred. She had passed through a mild attack of scarlatina about ten days previous to the occurrence of the above symptoms, but had laboured under hooping-cough, in a mild form, for nine weeks. Purgatives of calomel and jalap were exhibited for two days, without benefit. Four ounces of blood were then taken from the arm, which was a little buffy. She experienced immediate relief, and after four days was convalescent.

R. B. æt. five years, eight days after a mild attack of scarlatina, became affected with general anasarca, short dry cough, oppressed breathing, and scanty secretion of urine; pulse 144, and sharp. A "brisk laxative" was given for two days, without any advantage being thence derived; when he was bled to the extent of five ounces, with immediate and decided relief of the pectoral symptoms. The blood was not sлизy. Two days afterwards the anasarca was almost gone, and in another day she was declared convalescent.

M. D. æt. fifteen years, about six weeks since laboured under scarlatina. After the disappearance of the efflorescence, she became affected with anasarca, which first appeared on the face, and gradually extended over the trunk and extremities. She complained of pain in the left side of the chest, with dyspnœa and cough, accompanied with a sensation of suffocation when she assumed the horizontal posture. These symptoms had existed eight days, when ten ounces of blood were taken from the arm. The following day she was found to be much relieved; a purgative was then given. The next day, the cough and dyspnœa were nearly gone, and the

\* *Edinburgh Medical and Surgical Journal*, No. 53.

anasarca much subsided. Four days afterwards she was convalescent.

Dr. Tweedie has witnessed other analogous cases, in which the efficacy of blood-letting was equally prompt and decisive.

In the 233d Number of our Journal, we gave an account of the utility of the *Cubebs*, as a remedy for Gonorrhœa; and we again solicit the attention of medical practitioners to this remedy. Mr. ADAMS, late of Ceylon, has recently published, in the Edinburgh Medical Journal, some cases shewing its efficacy, and he is disposed to consider it as a specific in the early stage of that disease. Our own experience leads us to think very highly of it, when exhibited before inflammation has come on: at this period, when conjoined with the usual injection of sulphate of zinc, we have but rarely found it to fail in removing the affection within two or three days.— After much inflammation has appeared, we have not thought proper to employ it; but Mr. Adams states, that,

"In referring to my case-book, I find those patients who did not derive any benefit from the cubebs, had previously used other remedies for the space of eight or ten days; the inflammatory symptoms had subsided, and the disease had so established itself, as not to be under the control of so simple a remedy."

*Lond. Med. & Phys. Journal.*

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*An Analysis of the Subject of Extra-Uterine Fœtation, and  
of the Retroversion of the Gravid Uterus.* By JOHN  
KING, Esq.

THE most interesting part of the work which we now introduce to our readers, is an account of a new operation for the delivery of an extra-uterine fœtus: to this we shall, therefore devote our chief attention, passing over some preliminary reflections respecting the act of conception, with which it commences, (which we rather wish the author had not indulged in,) to what will render his memory identical with the history of the medical art.

The case which we are about to relate occurred in Edisto Island, in South Carolina, where Mr. King formerly resided. Nothing is said respecting the state of the patient during the time of gestation, previous to the commencement of the pains of labour, which the woman had experienced for four days, when Mr. King was requested to visit her. These pains occurred in the manner of those of natural labour, but were not attended with any other of the ordinary signs of that

process. On examination *per vaginam*, the os uteri could not be discovered. The nature of the case was readily discerned by Mr. King; and, the patient being exhausted by the pains she had suffered, he, after a little reflection, determined to perform the operation, of which we shall give the history in his own words:

" It consisted in laying the vagina open to a great extent. The head of the foetus floated and vacillated on the right side of the uterus, and pushed the uterus from its situation. I introduced a small bistoury, guarded by the end of my finger, as far as I possibly could; so as completely to embrace the circumference of the head, and thereby prevent any laceration of the parts in the progress of delivery. I then pierced the vagina through, and carried the knife five or six inches downwards and backwards, so as to insure the easy extraction of the child's head. The instant the vagina was laid open, the waters flowed abundantly; the membranes being laid open with the same incision. I then introduced my hand through the wound in the vagina, and found the infant very high up, and firmly fixed, without any prospect of its descending into the pelvis.

" As we could derive no help from the contraction of the uterus in this case, and all the efforts of the mother depending on the contraction of the recti, transverse, and oblique, abdominal muscles; I therefore desired the assistants to press gently and constantly upon the abdomen, and to imitate a circular descending motion with their hands. The mother, animated thereby with the prospect of delivery, redoubled her efforts; and, with the help of the vectis, I perceived the head to advance by slow degrees into the pelvis, and I afterwards, with the forceps, completed the extraction, after a long and uninterrupted exertion. The child appeared to be still-born; but, not being certain of that, I inflated the lungs, and was pleased to find it had borne the brunt of the day without a fatal event. The haemorrhage from this large incision was inconsiderable. The infant was of the common size, and well-conditioned. The placenta was uncommonly small, and the funis umbilicalis remarkably thin, so that it ruptured it on the evolution of the infant, though without any haemorrhage.

" The morning after the delivery, I extracted a full bleeding from the arm, and repeated an anodyne. I left the patient without complaining. I had caused her to lie on an inclined plane, upon her back, with the head very low.

"I was not able to see her again until the third day. I then found her state uncomfortable, with pain over the pubes; and, on examination *per vaginam*, discovered the intestine pushing at the wound, the wound itself being much contracted. I ordered her to lie on the left side, with the hips more elevated, to favour the retraction and gravitation of the intestines from the wound. This uneasy position favoured our views and answered our expectations. I caused a blister to be applied over the pubes, and prescribed a saline anodyne mixture, to be taken three or four times a-day. I made it an object to constipate the bowels for ten days, until the danger of any hernial protrusion was over.

"In two weeks this woman, without my consent, walked about. I then found the intestine could no longer protrude through the wound, under any circumstances of posture. In two weeks more, I could not discover that there had been any incision made in the vagina. The uterus resumed its natural site."

A similar operation has since been performed by Dr. DELISLE, of Valogné,\* but in this case neither the mother nor foetus survived. This event may, however, be probably attributed to the great sufferings experienced by the mother during the whole period of gestation, which had rendered her state of body extremely feeble. She also experienced a considerable degree of haemorrhage before the placenta could be extracted; and she was almost exhausted by labour-pains before Dr. Delisle was called to visit her. The infant was born alive, but died in about half an hour: it was not apparently of above six months and a half, or seven months.

Many circumstances render this operation preferable to an incision in the abdominal integuments, in cases of extra-uterine gestation; particularly, the less probable danger from a wound in the vagina than from one in the abdomen, and the free exit that in the former situation would afford to any haemorrhage that might ensue on the separation of the placenta. But, in opposition to this, may be advanced, the greater difficulty in the extraction of the foetus through the pelvis, when nearly full-grown, than through an opening in the abdomen. Some degree of prejudice seems to exist against the latter method, apparently in consequence of its forming part of an operation of a very different character, that of hysterotomy. It does not seem to have been sufficiently considered,

\* *Bulletin de la Société Medicale d'Emulation.* Mai 1812. *Journal Universel des Sciences Med.* t. x.

that the principal danger in this case depends on the incision of the uterus, not on that of the external integuments.

The Signori Rossi, of Parma, a short time since, performed the incision of the abdomen in a case of rupture of the uterus occurring during labour, with a favourable result to the mother. The infant was, however, born dead, apparently in consequence of the placenta having been long separated from the uterus; as the aid of those surgeons was not required until after the lapse of six hours from the time of the accident.

Extra-uterine pregnancy is, apparently, no uncommon occurrence, as a great number of cases have been recorded within these few years past; and the propriety of performing one of the above operations without delay at the proper epoch, cannot possibly be doubted. Experience alone, we think, can determine which is the preferable method in the generality of cases. The period at which it should be executed, is indicated by a circumstance, observed in nearly all the cases on record, which must confound the reasonings of the mechanists on the physiology of the human body: we mean the occurrence of uterine contraction and pains, similar to those of ordinary labour, about the period of the full growth of the foetus. Of the laws on which this depends, we shall probably for ever remain ignorant. The causes of the enlargement of the uterus, and the formation of the flocculent membrane in it, similar to the epichorion, which has also been witnessed in the cases where opportunities for examination have occurred, are more easily intelligible.

We shall not enter into a consideration of the arguments of Mr. King to prove the occurrence of extra-uterine scætation, as we do not believe it possible that any doubts can be entertained respecting it at the present period. These arguments would have possessed more importance a few years since, than they do now after the discoveries that have recently been made, and generally promulgated, respecting the subject to which they relate. *Lond. Med. & Phys. Journal.*

### *Case of Hydrocephalus successfully treated by the Removal of the Water by Operation. By JAMES VOSE, M. D.*

[*Medico-Chirurgical Transactions, vol. ix.*]

THE patient was an infant of seven weeks old, whose head was enlarged by the accumulated fluid to between two and

three times its natural size. There was but little ossification at birth, very soon after which, the mother perceived the head to increase in size, which had gone on progressively.—The head was now become so transparent that when held between the eye and the light, it was not inaptly compared to a paper lantern. The child at the time first visited, was free from any symptoms indicative of a serious affection of the general health, with the exception of a slight derangement of the bowels, and occasional convulsions. Three ounces and five drachms of a limpid fluid were drawn off by puncture with a common couching needle, and the opening was closed by adhesive plaster and roller. About an equal quantity dribbled from the orifice after the operation, and the child suck so extremely low as to create the greatest alarm. Revival, however, took place, without the aid of medicine, and the water having again accumulated, the operation was repeated, with less precaution, the puncture being performed with the curved and pointed bistoury; five ounces were drawn off without any unpleasant accident following. This operation was repeated twice or thrice afterwards, and the child ultimately recovered. It is remarkable that after the last operation, there was a considerable discharge of water from the bowels, very similar to that drawn off from the head. After this, ossification advanced with great rapidity; the child improved in health, size, and vigour. Its appearance became good, and no convulsions afterwards occurred.

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#### MEDICAL LECTURES.

The lectures of the Medical Institution of Harvard University, will commence at the Medical College in Boston, on the third Wednesday in November.

Anatomy and Surgery, by Dr. WARREN.

Chemistry, by Dr. GORHAM.

Midwifery and Medical Jurisprudence, by Dr. CHANNING.

Materia Medica, by Dr. BIGELOW.

Theory and Practice of Medicine, by Dr. JACKSON.

Dr. CHANNING Dean of the Faculty.

MEDICAL INSTITUTION  
OF  
HARVARD UNIVERSITY.

IN THE COURSE OF THE PRESENT YEAR THE FOLLOWING GENTLEMEN  
HAVE RECEIVED THE DEGREE OF DOCTOR IN MEDICINE.

- Josiah Bartlett, jr. A. M. Charlestown.—*Acute Rheumatism.*  
 Gamaliel Bradford, A. M. ditto.—*Typhus Fever.*  
 Henry B. C. Greene, S. Berwick.—*Amenorrhœa.*  
 Silas Holman, Boston.—*Digestive Organs.*  
 John Jeffries, jr. A. M. Boston.—*On Purgative Medicines.*  
 Appleton Howe, A. M. Hopkinton.—*On Blood-letting.*  
 James W. Mason, A. M.—*On Dysentery.*  
 Elisha D. Payne, Canterbury, (Con).—*On the Cold Stage of Fever.*  
 Daniel J. Perley, Ipswich.—*On Vaccination.*  
 Jesse Smith, A. M. Boston.—*On Hydrocephalus.*  
 William Vance. Maine.—*On Rheumatism.*  
 Danforth P. Wight, A. M. Dedham.—*Vaccination.*  
 John Whitridge, A. M. Tiverton, (R. I.).—*On Conium Maculatum.*

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NOTICE.

In the press, Elements of Chemical Science, vol. 2. By JOHN GORHAM, M. D. Member of the American Academy, and Professor of Chemistry in Harvard University.

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*Obituary.*

JOHN JEFFRIES, M. D. aged 75, an eminent practitioner of medicine in the town of Boston.

ISAAC RAND, jr. M.D., aged 50.

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